



NORMAN J. COLMAN, Editor.

BENJ. BRYAN, Publisher.

VOL. XIV.

ST. LOUIS, MO., DECEMBER, 1862.

NO. 12.

## THE VALLEY FARMER, AN AGRICULTURAL, HORTICULTURAL AND STOCK JOURNAL,

PUBLISHED ON THE FIRST OF EACH MONTH, AT  
No. 97 Chesnut Street,  
SAINT LOUIS, MO.

TERMS (always in advance), 1 copy, one year, \$1 00;  
4 copies, \$3 00; and any greater number at the  
same rate—only 75 cents per copy.

Any one sending Two NEW Subscribers and  
Two Dollars, shall receive a copy one year GRATIS,  
as a Premium. Remittances at our risk.

Advertisements—\$15 00 per page; \$10 00 per half  
page; and \$2 00 per square, each insertion.

ADDRESS, BENJ. BRYAN, PUBLISHER,  
97 Chesnut St., Saint Louis, Mo.

### DEEPENING THE SOIL.

Our meditations this morning have had for their subject the oft-heard exhortation to the farmer to "Deepen the Soil." Taking this for our text, we will give the reader "a homily" thereon—considering only the one side of the matter—the soils which are benefited by cultivation of this character.

I. *The Benefits of Deepening the Soil.*—A modern writer remarks, and well remarks, that "a deep soil is better than a shallow one, because it furnishes a more extensive feeding ground for the roots of the cultivated crops. The elements of nutrition, which the plant finds in the soil are not all upon the surface. Many of them are washed down by the rains into the sub-soil, and some are found in the decomposing rocks themselves. These, the plants, by a sort of instinct, search out and find, as well in the depth of the earth as at its surface, if no obstacle opposes."

### II. *The Preliminaries to Deepening the Soil.*

1. It is useless to deepen the soil by culture farther than we first lower "the line of standing water"—the line where water ceases to drain or filtrate away but passes off, if it pass off at all, by the slow process of evaporation. It matters little what the soil is below this line, because, as the same writer's remark will illustrate, "no root, except those of aquatic plants, will grow in stagnant water. Every one who has attempted to grow deep-rooted vegetables upon half-drained swamp land, has observed the utter impossibility of inducing them to extend downward their usual length. Parsnips and carrots, on such land, frequently grow large at the top, but divide into numerous small fibres just below the surface and spread in all directions."

2. We need deepen the soil no lower than it is furnished with food for vegetable growth, either naturally or by application of fertilizing matters from other sources. Most soils only need loosening and deepening by culture so as to allow aerating influences to act, to become able to furnish nutriment to the roots of plants. But we cannot dwell on this question here.

### III. *The Methods of Deepening the Soil. How can the work be accomplished.*

1. We may deepen the soil by thoroughly under-draining it. With no further working, save the operation of continued drainage, it will in time become deep and mellow. It does this from three causes: *First*, the drains allow the surplus water to filter rapidly away *through the soil*, instead of remaining a long time just below the surface, hardening, and in a manner, puddling the soil. *Second*, if the soil is clayey, drying it by drainage instead of evaporation, causes it to shrink and crack, thus tending to its deeper pul-

verization. And, *third*, into the cracks thus formed, surface mold is washed, which not only keeps the clay from again uniting, but invites the roots of plants to follow the vegetable food thus supplied, thus increasing the pulverization until, in the course of time, it becomes equal to that of the drainage itself.

2. A more rapid method of deepening the soil is by the use of the sub-soil plow, or by deep culture with any implement adapted to the purpose. After lowering the line of standing water, we may break up the hard sub-soil at once; we shall find it to change its character rapidly as it becomes penetrable to the air; very soon instead of being shunned by the roots of cultivated plants it will be sought by them, and they will show by the larger growth above ground that there is a large and healthy growth of roots below. We cannot, we should remember, have the one without the other.

3. The soil may be deepened by a gradual increase in the depth of the plowing given in the usual course of preparation for crops. If we have a field which has never been cultivated beyond five inches deep, we may very safely and profitably plow it six inches for the next crop, and go an inch deeper each time for several succeeding crops. There is no difficulty in turning a furrow nine or ten inches deep with our usual teams and implements, after the soil has been thoroughly broken up to that depth, and there are few if any farm crops but will fill with roots a fertile soil one foot in depth. It may require more manure to enrich such a soil, but in the same proportion it will be more productive than a shallower soil, and will continue much longer to give profitable returns without additional manure.—[Country Gentleman.]

**HOW A TOAD PULLS OFF HIS PANTS.**—A writer tells the following:

About the middle of July, I found a toad on a hill of melons, and not wanting him to leave, hoed around him. He appeared sluggish and not inclined to move. Presently I observed him pressing his elbows against his sides rubbing downwards. He appeared so singular that I watched what he was up to. After a few smart rubs his skin began to burst open straight along his back. Now, said I, old fellow, you have done it; but he appeared to be unconcerned, and kept on rubbing until he had worked down all his skin into folds on his sides and hips, then grasping one hind leg with his hands, he hauled off one leg of his pants the same as anybody would, then stripped the other leg in the same

way. He then took his cast off cuticle forward, between his forelegs, into his mouth, and swallowed it; then, by raising and lowering his head, swallowing as his head came down, he stripped off the skin underneath until it came to his forelegs, and then grasping one of these with the opposite hand, by considerable pulling stripped off the skin; changing hands he stripped the other, and by a slight motion of the head, he drew it from the throat and swallowed the whole. The operation seemed to be an agreeable one, and occupied but a short time.

### Planting Chesnut for Timber.

Young, second growth chesnut trees, make excellent fencing and other timber—and if, in addition, it be cut in summer, (whether with or without regard to the age of the moon, no matter which,) it will last a long time. John Johnston, of Geneva, finds second growth chesnut best for his fence posts—old trees he regards as of little value.

Chesnut trees on light soil grow very rapidly. Any farmer who has a few acres to spare may make a very valuable investment by planting a chesnut orchard. The best way to do it, is to take a field that is suitable for some cultivated crop, corn for example. Plow two or three furrows together into a ridge every twelve feet apart, over the whole field, either late in autumn, so as to admit of early planting, or else very early in the spring. Plant the chesnuta along this ridge, three or four in a hill, about the same distance as hills of corn. They are difficult to transplant with success, or without check in growth, and this mode secures vigorous young plants at once, thinning out all but one in each hill the following year. Plow the spaces between, and plant with corn or potatoes, and cultivate and keep clean the young trees with the rest of the field. If care is taken by using stakes, each hill of chesnuta may be made to stand in a row with the hills of corn, so as to cultivate the whole field both ways. Or, if the corn is planted with a drill, it will not be necessary to take care in this respect, as the cultivator will run one way only. This cultivation, if kept up for a few years, with crops of corn, beans, potatoes, carrots, &c., or with plowed strips near the trees, and sowed grain between, which is not so good, will give a very rapid start to the young trees; and if they are thinned out in some years as they crowd, thus giving good stakes, they will by 20 years, form a valuable plantation—this being the age found most profitable to cut down young timber for renewal. A great advantage of this plan is, the wagon used for drawing off the timber may be driven between the rows in a straight smooth road, and not as in common irregular woods, with constant twists and turns to avoid hitting trees, stumps or roots.

Many fail in raising the chesnut from seed, because they allow the shell of the nut to become dry. Take fresh chesnuta in autumn, and mix them with slightly moist leaf mould, and

leave them exposed, out of the reach of mice, all winter—they are best if in contact with the moist ground. Then, as soon as they first begin to sprout in spring, plant them two inches deep.

Locust trees may be planted in the same way with corn, but need not be planted before the corn itself, as they will not sprout without scalding; for this reason they are more easily managed. They make admirable timber, when not injured by the insects.

### CULTIVATION OF WHEAT.

ED. VALLEY FARMER: I have been often astonished in my rambles through the West to see so little attention paid to the seeding of that most important of all crops, wheat. I am convinced the many failures in raising good crops of this staple, are owing more to slovenly seeding than unfavorable seasons or need of underdraining. "Many know the right—but wrong pursue."

A farmer has 50 or 100 acres he wishes to seed with wheat, with a small force, and much to do at the proper time for seeding; better for him to let his land lie idle than put his seed in the earth half prepared by the plow and harrow; or better sow half the quantity, which will yield him more grain than the whole on land not properly prepared before seeding. If land is not plowed from spring to September, it is impossible to get the ground in order for a large yield. The weeds and grass encumber the ground so much that it cannot be well plowed; therefore, the ground should be broke up soon after harvest, and again by the 1st to the 15th of September. Sow from 1½ to 2 bushels to the acre; harrow and roll the ground immediately, and a large yield is sure to follow.

The process of cultivating wheat is extremely simple. All required in this region is to have the soil well prepared by pulverizing, and sow early, thereby preventing freezing out and rust, which rarely attacks early wheat. The wheat crop in St. Louis county has yielded more abundant than for many years; but it is not owing to superior cultivation, but a propitious season and a kind Providence. S.

St. Louis Co., Mo.

How to STORE ICE.—The *Scientific American* makes some suggestions on the subject of storing ice which are timely. Before filling the ice house, clean straw should be spread upon the floor in a layer of several inches. The blocks of ice should be cut as large as possible, and no spaces permitted between them. All the inter-

tices should be rammed down with small pieces of ice and sprinkled with water so as to form an air-tight mass. The circulation of air through the ice will cause it to melt rapidly. A space should be left all around the side to be filled in with several inches of straw. Very cold days should be chosen for filling the ice house, and the blocks of ice after being removed from contact with the water, should be left an hour or two in the open air to cool. The lower surface of the ice which has been in contact with the water, is only a few degrees lower in temperature than the water, whereas the atmosphere may be twenty or more degrees lower.

### FALL PLOWING.

The advantages of fall plowing may be enumerated as follows:

1. In autumn, the team having become inured to work through the summer, is more vigorous and better prepared for labor than in the spring, and other farm work is less pressing in its demands upon the time and attention than in that bustling period. Let all the plowing be done which is possible in the fall, and still the spring work would give abundant employment to the farmer and his teams, in drawing manure, cross-plowing, cultivating, harrowing, &c.
2. In the fall, low, moist lands are generally in better condition for plowing than in the spring time. We say generally, for this season low, moist lands are decidedly moist, at present. Still we cannot hope for any better state very early next year, and, if plowed as they should be, wet lands will suffer very little from water through the winter.
3. Stiff, heavy soils, plowed in autumn, undergo, by the action of the water and frost, a more thorough disintegration—clays are pulverized and crumbled, and heavy loams and pan lands are acted upon in a like manner with the like benefit.
4. Heavy, coarse swards, full of rank weeds and grasses, can be better subdued by plowing in the fall—their roots are more apt to die out, and far less liable to sprout again than when plowed in the spring. The turf is better prepared, by its more advanced state of decay, for the use of the crops which may be sown or planted upon it.
5. Fall plowing disturbs the "winter arrangements" of numerous worms and insects, and must destroy a large number of these pests, and also their eggs and larvae. This is a minor advantage, but one worthy of consideration, especially on lands infested with the wire-worm.

The principal objections to fall plowing are these:



1. The loss of that fresh, friable condition readily permeable to air and moisture, and the consolidation of the soil by long exposure to changing and stormy weather. This, on soils of a light character, is a very serious objection to plowing in autumn.

2. The loss of vegetable matter and the gases of the same while in a state of decay, is another disadvantage. The latter is but a small loss, if the work is done late in the fall, but often, on hill sides, a large part of the soluble and floating organic matter is washed away by the heavy rains of winter and early spring time. The soil is also consolidated by the same influences. Heavy swards thus situated would sustain less injury than light swards or stubble lands.

The advantages and disadvantages of this practice may be appropriately followed by brief directions for performing the work.

1. Do it in the best manner.
2. Throw up low land in narrow beds and cut cross furrows and drains sufficient to carry off at once all surface water. This will obviate one great objection to fall plowing.
3. Plow deep and narrow furrows—such will best secure the action of the ameliorating influences of frost upon the soil. A rough, broken surface is better than a smooth one for this purpose.—[*Rural New Yorker*.]

### APPLE BUTTER.

In a brass, copper, bell-metal, or porcelain-lined kettle, boil down to one-third, a barrel of new cider, made from apples, "sweet, sour, or mixed." While the cider is being boiled, pare, quarter and carefully core, one and a half bushels of fair solid apples—Vandeveres answer well—and when the cider is reduced, cast into it the apples thus prepared, and stir them occasionally until they begin to soften, after which the stirring must be kept up without cessation until the compound becomes thoroughly amalgamated—smooth, and of the consistence of New England hasty pudding. It must then, unless in a porcelain-lined kettle, be immediately removed into stone or safely glazed earthen ware pots, (wooden vessels are apt to cause fermentation,) and set it in a place moderately cool and dry, and it will keep throughout the year.

The above is a good general rule for making this really delicious and economical table luxury. Experienced housekeepers occasionally find it convenient to vary from it in some particulars. The cider is sometimes reduced to one-fourth the

original quantity; but this is uncalled for. In the Northern States, apple butter for winter use is frequently made by boiling the cider down only one-half, and putting in two bushels of apples to a barrel of cider.

Apples and quinces, in the proportion of two-thirds of the former to one-third of the latter, many deem a great improvement. If spices are to be used, it is better to mingle them with the apple butter just before placing on the table, otherwise the essential qualities of these will probably evaporate before the article is used. Peaches, quinces, pears and plums all make very good butter when boiled with the cider. If the plums are sour, the cider should be made of sweet apples, or sugar will have to be added. Of peaches and plums two and a half bushels are required to a barrel of the liquid.

For the stirring process there must be an implement constructed somewhat after the following description: Take a piece of board or a thinly hewed stick of wood that will not impart a disagreeable taste, let it be from one to two feet long, and from five to seven inches wide, or in proportion to the size of the kettle to be used. Plane it smooth, and slightly round it at the corners of the part designed for the lower extremity, then gradually taper it two-thirds of the length, when the sides may be considerably hollowed out so as to leave it only two or three inches wide at the top which may be rounded off. About two inches from the upper end, bore a hole so that a handle may be inserted in a position nearly at right angles with the stirrer, which must have several inch holes bored through the main part and left open. The handle should be from five to seven feet long. The object in having it so long is principally to prevent the person stirring from being scalded by the particles sputtering out from the contents of the kettle.

To make apple butter very strong and very thick, so that it will keep in wooden vessels and bear transportation, boil one barrel of cider down to a fourth, and put in two bushels of apples.

No one should undertake to make apple butter without calling in the assistance of two or three friends, unless there is a strong force at home. After the apples begin to dissolve, the fire must not be kept very brisk, and no brands must be permitted to lie against the bottom or sides of the kettle, for at the points of contact, notwithstanding the stirring, there is danger of a portion of the contents settling and burning. In this way butter and kettle are both sometimes ruined.

When a brass or copper kettle is to be used, unless it is already perfectly bright, it should previously be placed over the fire, having in it a little salt and vinegar, and after being lightly heated, taken off and scoured with the above named ingredients, then washed in soap suds and rinsed in pure water.

Apple butter is a dish of Dutch or German origin, and is not to be eaten as sauce but is designed to be spread upon bread as butter, hence its name.—[*Ex.* N. M. THORNTON.



### Advantages of Under-Draining.

1. It prevents drouth.
  2. It furnishes an increased supply of atmospheric fertilizers.
  3. It warms the lower portions of the soil.
  4. It hastens the decomposition of roots and other organic matter.
  5. It accelerates the disintegration of the mineral matters in the soil.
  6. It causes a more even distribution of nutritious matters among those parts of the soil traversed by roots.
  7. It improves the mechanical texture of the soil.
  8. It causes the poisonous excrementitious matter of plants to be carried out of reach of their roots.
  9. It prevents grasses from running out.
  10. It enables us to deepen the surface soil—by removing excess of water.
  11. It renders soils earlier in the spring.
  12. It prevents the throwing out of grain in winter.
  13. It allows us to work sooner after rains.
  14. It keeps off the effects of cold weather longer in the fall.
  15. It prevents the formation of *acetic* [that is, sour—vinegar contains one or two ounces in a pound of acetic acid.—Ed.] and other acids, which induce the growth of sorrel and similar weeds.
  16. It hastens the decay of vegetable matter, and the finer comminution of the earthy parts of the soil.
  17. It prevents in a great measure, the evaporation of water, and the consequent abstraction of heat from the soil.
  18. It admits fresh quantities of water from rains, &c., which are always more or less imbued with the fertilizing gases of the atmosphere, to be deposited among the absorbent parts of soil, and given up to the necessities of plants.
  19. It prevents the formation of so hard a crust on the surface of the soil, as is customary on heavy lands.
- We will add another item to make out the score, and one of no less consequence than the most important he has named.
20. It prevents, in a great measure, grass and winter grains from being *winter-killed*.—[Ex.]

**LARGE FARMS IN CALIFORNIA.**—A California correspondent of the *American Stock Journal*, gives an account of several of the large farms in Los Angeles county—among them that of Don Abel Stearns, who owns twelve ranches, which comprise 230,815 acres, upon which he has 18,000 head of cattle, and 3,000 horses.—Forty-three others are mentioned in the same county, who own farms ranging from 4,000 to 60,000 acres.

### USES OF COAL OIL.

ED. VALLEY FARMER: I wish to state a few facts as to the uses of coal oil as a medicine or remedial agent. I have been using it ever since I read the article of Prof. J. B. Turner, of Jacksonville, Ill. I find it to be the best liniment in use for all kinds of cuts, bruises, strains or sores. As to its efficacy in rheumatism, my experience does not reach; but I should think it good, and at least worthy of trial.

It is an excellent remedy for a tickling cough at night. Rub it on the big joint of the neck on going to bed.

It is also good to clean out a gun, loosening the burnt powder bed very quick.

Coal oil also deserves to be universally used in every family in the land as light as well as medicine.

A word to the Farmers' Club of St. Charles: Gentlemen, if you want to destroy Elders quickly, surely and easily, just run your plow deep as you pass through the patch. As soon as you are through, stop your team, and go back and pull out all loose roots and leave them to dry. It is a little trouble, but in three years you will have no Elders, when treated thus.

Dundee, Mo.

S. S. BAILEY.

[Written for the Valley Farmer.]

### Cure for Potato Rot.

The *Scientific American* says, lime applied to potatoes after they are dug, will prevent them from rotting. It applies the lime as the potatoes are put into the bin, say about a bushel of lime to 40 or 50 of potatoes.

The other day, while calling on a neighbor of ours (Dr. U. Potter), he took us into his cellar and showed us his potatoes, all limed, and some covered with sand. He saw his potatoes were affected when he put them into the cellar, and soon after began to rot badly. He then applied the lime.

The lime had absorbed the moisture and much of the rot, so that the potatoes were dry and nice. The rot was arrested, and the potatoes were better in quality, more mealy—the result of the lime.

We know lime applied to the soil will improve potatoes; and here it is demonstrated that it will benefit them after they are grown. I have had ocular and experimental evidence of the truth of this. A very common potato may thus be improved.

This is of importance. If we can improve coarse, watery tubers by the application of a

little lime, to say nothing of the prevention of rot, a very great point is gained.

Another thing. Potatoes should be left in the ground till late. This is the practice in some parts of the country. If left till winter compels them to be removed, those intending to rot will do so, and will soon be among the missing ones—absolutely decayed, gone into the soil, and only sound ones remain.

This is better than to bother with them after they are secured. To be sure, there are less in a hill, and these not of the best quality, for the best always decay, especially the ripest.—That probably accounts for those remaining in the hill (left late) being generally small, and more or less unripe. Dig a potatoe before it is ripe, and it will not rot: hence, those dug very early will be sound. Have we not here a hint toward the discovery of the rot? F.G.

#### Thirty-six Maxims for the Farmer.

1. Never get in debt when you cannot see your way out again; when you owe, pay as fast as you can, and promptly, according to your promise.
2. Never enlarge your farm, when half of what you now own is not half cultivated.
3. If you own more land than you can till well, are in debt, or need funds to make necessary improvements, sell part of your farm, and use the money to pay your debts, and make your improvements.
4. Never borrow money to build a showy house, when a less pretentious one would answer better; and never lend money when you have undrained or poorly tilled land to improve.
5. Lay out a system of improvements for your farm and buildings, and as your means permit, carry these plans out.
6. Do not enter upon speculation with other people's money or your own, unless you see clearly that you will make profits; and even then, do not do it to the neglect of your farming.
7. Do not mortgage your farm for money to buy goods; very few men can enter the mercantile business without training for it, and not become bankrupt.
8. Do not buy fancy stock and pay fabulous prices, on the spur of the moment, or without knowing why you want it, and how you are to make the investment profitable.
9. Do not keep poor stock, when you can keep good at the same expense, and with four times the profit.
10. Do not change your kind of farming, because what you raise this year is low priced for that which is high; ten chances to one, your crop will be up next year, and that which is up now will then be down.
11. Do not try to grow those crops for which your farm is not well adapted.
12. If you have a good location, do not sell

out expecting to better it, because you are offered a good price.

13. Do not change farms often, for by so doing, you can carry out no definite system of improvement.

14. Do not begin to improve till you have a general plan of what you wish to do; to do so would be like commencing to get out timbers for a house before you know its length and breadth.

15. Unless your crops are good ones, sow less, and plow better.

16. Be present with your hands as much as possible, otherwise little work will be done, and that little, poorly. No business requires the master's oversight more than farming.

17. Cultivate a little, well, rather than much, poorly. Who does not remember the story of a farmer who had two daughters? When the first one married, he gave her one-third of his vineyard, and yet he had as many grapes as formerly; when the second married, she took half the remainder for her portion, and yet the yield of the father's share was not lessened.

18. Keep ahead of your work, or your work will keep ahead of you.

19. Resolve that your farm shall be a profitable one, if industry and good management will make it so.

20. Invest your surplus earnings in making such improvements as will add to the profit, appearance and convenience of your farm.

21. When you make experiments, see that you keep within the laws of nature. These are the farmer's helps; make such experiments as appear to be reasonable, no matter what your neighbors say.

22. Be kind to those you employ, and to all the animals you work.

23. Sell your produce when prices are high, and if you do not need the money, keep it when they are very low, unless it is certain, they will remain so.

24. Make yourself thoroughly acquainted with the principles of agriculture, and be guided by them.

25. Perform all labor at the right season.

26. Do all jobs in the best manner.

27. When you begin one piece of work, finish it before you commence another.

28. Do not leave work half done, expecting to finish it next year; finish as you go.

29. Take care of your tools when you get through using them, and do not work with poor ones, when you can afford good ones.

30. Do not buy old wagons, harness, plows, etc., at auction, because you can get them cheap. Better expend the money for books, travel, or some needed improvement.

31. Do not keep more stock on your farm than you have plenty of pasture for.

32. If at forty-five you have a fair property, do not work with your muscles so hard as formerly, but save the afternoon of each day for mental and social improvement.

33. Give your children a good education, physically, intellectually, morally and socially.

34. Take an interest in all improvements that have a bearing on agriculture.

35. Use machinery and horse-power, where possible, instead of your own muscles.

36. In all you do, endeavor to get hold of the long end of the lever, instead of the short one, if you would work to advantage.

### Preserving Potatoes by Burying them.

A correspondent of the *Scottish Farmer* writes to that journal as follows:

Your notice of the conservative principle in seeds buried at a depth beyond the action of air and moisture, brings to my recollection a case of potatoes being buried for two years, six feet under the surface, at the end of which time they were taken up quite sound and good for use. The case I refer to was the result of accident, and happened thus. I had an old ice well of the ordinary description, which I abandoned when I built one of double timbers on the surface, after the American fashion. My gardener used for several years the old well as a potato store. It happened three years ago that the roof fell in and buried several hundred weights of potatoes, which, as we had plenty, was not cared for at the time. Last year we required stones for a purpose, and had those forming the sides and roof of the old ice-house dug out, when to our astonishment we found almost the whole of the potatoes as sound as those of the same year's crop. I mention this as it may be turned to account in seasons when we have, as we had last year, a surplus crop, that by burying them deep enough, and in a dry place, we might secure ourselves against a short crop, as in all probability will be the case this year on account of the prevailing disease. In mentioning this to a friend learned in such matters, he tells me that potatoes buried one foot deep produce shoots near the end of spring; at the depth of two feet they appear about the middle of summer; at three feet in depth they appear very short, and never come to the surface; and between three and five feet they cease to vegetate. He further informs me that he has buried potatoes in his garden at the depth of three and a half feet, which were not removed until after one and two years, when they were found quite sound, and possessed their original freshness, firmness, goodness and taste.

**WATER PROOF CEMENT.**—The following cement has been used with great success in covering terraces, lining basins, soldering stones, and everywhere resisting the action of water. It is so hard that it scratches iron. It is formed of ninety-three parts of well burnt bricks and seven parts of litharge, made plastic with linseed oil. The brick and litharge are pulverized;

the latter must always be reduced to a very fine powder. They are mixed together, enough of linseed oil added. It is then applied in the manner of plaster, the body that is to be covered being always previously wet with a sponge. This precaution is indispensable, otherwise the oil would fritter through the body and prevent the mastic from acquiring hardness when covering a large surface it sometimes has in it, which must be filled up with a fresh quantity of cement. In three or four days it becomes hard and firm.

### Bees--A Chapter of Well Settled Facts.

1. All stocks of bees should be kept strong in numbers.

A well garrisoned city may defy assault.

2. A moderate increase of swarms will keep them strong, and secure the largest yield of honey.

As the calves are raised at the cost of butter and cheese, so bees are multiplied at the expense of honey.

3. Bees filled with honey are not inclined to sting.

As the robber's knife is stayed by your purse, so bees are bribed by proffered sweets.

4. In natural swarming, bees fill themselves with honey.

Emigrants to a new country carry their treasures along as capital to begin with.

5. Bees alarmed with smoke or otherwise, instinctively seize their stores.

The householder at the cry of fire, secures what he can.

6. There should be no communication between occupied hives, allowing the bees of one to pass directly into the other.

"No house is large enough for two families."

7. A swarm of bees destitute of a queen fast dwindles away; and unless supplied with one, soon perishes either by robbers or moths.

A country without a government, a farm without an owner.

8. Swarms having combs insufficiently protected by bees, furnishes a retreat for millers and food for worms.

Unguarded treasures invite thieves.

9. An excess of drones should be avoided by discouraging the construction of the cells that produce them.

Drones are the "dead heads" of the hive—the useless males in the farmer's herds.

10. The building of drone comb may, to a great extent, be prevented—first, by securing the construction of new combs in hives containing young queens; and, second, by placing frames to be filled, in other hives, near the centre.



"An ounce of prevention is better than a pound of cure."

11. Queens are most economically reared in small swarms.

Who would employ ten men to do what one could do better?

12. Small swarms, if united in the fall, winter more safely, and consume less honey.

"In union there is strength."

13. Bees of colonies containing fertile and unfertile queens, should not be put together without first "breaking them up," i. e., inducing them to fill with honey, and destroying the unfertile queen.

14. Natural swarming, always uncertain and perplexing, exposes the bee-keeper to much loss of time and money; while artificial swarming, securing at all times the presence of a worker-layer queen, doing away with all watching, and loss by flight to the woods, is both sure and economical.—[Metcalf's Key to Bee-keeping.]

#### FAMILY CIDER MILL.

ED. VALLEY FARMER: I will answer the question of F. G. in regard to the Family Cider Mill. Take the iron of an old fanning mill—that is the two wheels; have a journal put in the large one long enough for a crank, and one in the small one long enough on the off end to put a cylinder eight inches, and three inches on the frame, and three inches over for a fly wheel. Now make a frame of three-inch timber, three feet long by ten inches wide, with four legs to it, to suit your fancy. It is just as good to let the journal of the large wheel be long enough to reach across the frame and rest on the opposite side. These journals may all run on the wood with a wooden cap over them. Now get a piece of seasoned wood, eight inches long by ten inches in diameter; put the shaft of the small wheel through the piece of wood, and then turn the cylinder till it is perfectly true; then punch three square holes through thick tin; have the holes pretty large, and cover the cylinder neatly with it. Now fix a concave to the cylinder large enough on the top for an apple to go in and to come close to the cylinder at the side half way down. Put two screws of half inch iron through the end piece of the frame and into the concave to set it by means of the screws and keys between the concave and end piece of the frame. Now fix a little hopper, and it is ready. A boy to feed and a man to turn, can make a barrel of cider in a day, very easy. The press you can certainly make yourself, and you have all complete at a cost not exceeding \$5 00.

Dundee, Mo.

S. S. BAILEY.

#### DISSOLVING BONES.

We are told from all quarters that bones which are by some means converted into a powder or paste, are excellent for nearly all the plants we cultivate. The chemist tells us so, and gives us the reason for his opinion; while the observing farmer, who has used them on his growing crops, leaving a portion of them, side by side, without the bone, assures us that the superior growth and weight of seed where the bone dust is applied, is too obvious to leave any room for doubt. It is said, also, that the animals fed upon herbage where bone in some form is applied, are more healthy, grow faster, and yield larger products in milk, butter and cheese, than on those farms that have long been cropped without the use of bone.

If such is the case, it is well worth the attention of the farmer to save and secure all the bones he can, and convert them into a fertilizer in one form or another. If he but commences saving, he will be surprised at the amount collected in the course of the year, especially if he has an old horse to compost during the time. In order to make the saving certain, there must be a specific vessel in which to deposit them, such as a barrel or box of sufficient size, which should always stand in some convenient place. When thus collected, the question arises, how they may best be reduced to the form of powder or paste, so that they may be evenly applied to the soil.

In former years we have given the modes practiced to dissolve bones by the use of sulphuric acid, commonly called oil of vitrol. But as the acid is high, and there is some danger of accidents in its use, some other mode is preferable. We have also given a mode of producing the desired result by bedding the bones in horse manure—but that process is a tedious one, and few, we fear, will avail themselves of its use.

In a recent number of the *Country Gentleman*, a writer over the signature of "A. R. A.," introduces a new mode which is at once simple and cheap, and which, if effectual, is a valuable one. It consists in "putting the bones through a process of fermentation." We give it below as he states it, intending to employ it on the bones we have now collected, and will then state to the reader the result—whether favorable or not. He says:

"To a ton of crushed or ground bones, add two to four cwt. of common salt, and enough of hot water or urine, or liquid manure of any kind, to wet or dampen thoroughly the whole mass;

mix thoroughly, and then cover up the whole heap with dried muck, charcoal dust, saw-dust, sods and common soil. The heap will soon become warm and ferment; and after several weeks will be fit for application in the same way, and in about the same doses as ordinary super-phosphates or bones dissolved by the agency of sulphuric acid."

Of bones thus prepared, the *North British Agriculturist* says: "Bones fermented by adding liquid manure or hot water with a portion of salt, are manurially of about equal value, weight for weight, with those treated by sulphuric acid." As sulphuric acid is, at present, higher in price than formerly, and as there is always liability to accidents and injuries to both the clothing and the body of persons handling this strong acid, the process of dissolving by fermentation is at once more safe and more economical than dissolving by acid."—[*Ec.*]

#### FARMERS' LIBRARIES.

Ministers, lawyers and teachers are generally well provided with books. They would not feel competent to discharge their duties, were they not continually gathering information, and their employers would not place confidence in them, did they not think they were masters of a large amount of book knowledge. But what need has the farmer of books beyond his Bible and Almanac! His duty is to labor as hard as his strength will admit; and when he has done his work for the day, he will be tired enough to go to bed, without nodding over a book written by some idle person, who is too lazy to work.

Such has been the feeling of the mass of cultivators of the soil, but it is now, happily, changing. No man needs a good library more than the farmer. He has a profession that as really requires study to master it as the lawyer's or teacher's. There is hardly a branch of natural science that will not contribute greatly to his benefit. He also needs books upon horses, cattle and sheep; the management of the dairy; the care of bees; the proper way to raise apples, pears, and other fruits; the treatment of different soils, etc.

In addition to these, the farmer should have books of literature, history and travels. He will be as much interested and benefited by their perusal as any one. The money spent in purchasing a reasonable number of books, and the time spent in their study, will not be lost. Knowledge will give ability to increase the income of his farm, and will elevate his standing in the community.

A farmer's family, also, needs the means of improvement found in a well-assorted library, and its influence will be felt in their moral and intellectual advancement, and increasing their love of home. It may be thought by some that the expense cannot be afforded; but if a few are purchased at a time, in a few years a library of a hundred or more valuable volumes may be gathered, which will be worth more than the same number of dollars at interest.

#### GIVE HENS MEAT.

Many persons complain that their hens will not lay, and that, notwithstanding their assiduity in furnishing them with all the articles ordinarily recommended to ensure fecundity, the eggs they produce will not "half pay the expenses." Now, we presume there is something lacking, or the fowls would not certainly run their owners into debt. It is not generally understood, even by those who profess to be the most deeply versed in the mysteries of "henology," that the hen being omnivorous, requires, to ensure fecundity, a very liberal allowance of meat! When enjoying her liberty, in the fields, pastures, or door-yards, the principal part of her sustenance is derived from insects, worms, &c. She partakes but sparingly at such times of grain, and often when the article is supplied, leaves it for the more inviting food which nature supplies her with, in her favorite haunts.

Now, if we confine her where the natural propensity for this description of food cannot be gratified, even though we supply the best of grain, and in abundance, she will cease to lay. The privation affects her health, and will necessarily be an end of profit until the deficiency is supplied.

When fresh meat or fresh fish cannot be supplied, the common scraps of the butcher, which are hard and compact and can be kept any length of time, answer all the desired purpose. —[*N. E. Farmer.*]

#### Some Facts in Agricultural Science.

What will produce mold—that is, water, carbon and salts—forms manure.

The great difference in the action of manures depends on the differences of salts they contain.

Mold is active in proportion as it is more or less dissolved by water.

Some substances render mold easily dissolvable in water, and mold, being valuable in proportion to the ease with which it is dissolved, whatever enables it to dissolve may be added to it and will increase its value: these subjects are the alkalies and the alkaline earths.

The property of producing a substance which makes mold soluble depends on the nitrogen of the manure. This nitrogen, in the process of decay of animal and vegetable matter, becomes ammonia.

A pound of nitrogen makes two and a half pounds of volatile salt, or ammonia, is equal to a bushel of wheat.

The constituents of plants are, oxygen nitrogen and chlorine gases, lime, clay, magnesia, iron; magnesia and silex, potash and soda; phosphorus, sulphur, and carbon: The first four are called gases; the second called earths and metals, the last three are called combustibles.

When plants decay they return to the earth

the above elements, and form what is called mold or natural manure.

Mold is of two kinds, soluble and insoluble. It is valued in proportion as it is soluble.

Artificial manure is the salts, or a mixture of natural manure and salts.

The salts contain the sulphur, phosphorus and carbon, as sulphuric acid, phosphoric acid and carbonic acid, and the chlorine as muriatic acid.

Potash and grease makes soft soap.

Soda and grease makes hard soap.

Ammonia and oil makes what is called volatile liniment.

Oxygen and hydrogen gas, combined in the proportion of eight parts oxygen and one part hydrogen, forms water.

Oxygen combined with carbon, in proportion of two of oxygen to one of carbon, forms carbonic acid.

Five parts of oxygen to one of phosphorous, forms phosphoric acid.

Oxygen and hydrogen in plants exist in just the proportion to form water.

Decay is a slow combustion and gives the same products as fire. It is the union of the air with the oxygen of the plants.

#### A HEADER—GANG PLOWS.

ED. VALLEY FARMER: I had much difficulty last harvest in cutting and saving my wheat, and heard that much of it could have been avoided by using a Header. I have not had an opportunity of seeing one work. Would some of your readers who have used them have the goodness to say what they think of them. My land is level and clear of all obstructions. I would at the same time be glad to learn how the Gang Plow works. On both of these subjects I would like to have the candid opinion of the experienced.

J. WALKER.

*Prairie du Rocher, Ill.*

**FERTILIZING PROPERTIES FROM THE AIR.**—A quantity of ammonia and nitric acid, equal, perhaps, on an acre, to one hundred pounds of guano, is annually brought down to the soil by the rain, for the benefit of vegetation. Let not, however, the farmer deceive himself, and imagine that he may indulge in idle repose, while nature is thus keeping up the fertility of his lands. But he may profit by this newly discovered bounty of nature, if he will take full advantage of the atmospheric manure by means of drainage, which promotes the equal flow of water through instead of over his soil; by deep cultivation of the land, which brings every part of it in contact with the air. The atmosphere is to the farmer like the sea is to the fisherman—he who spreads his net the widest will catch the most.

#### VARIETY IN CREATION.

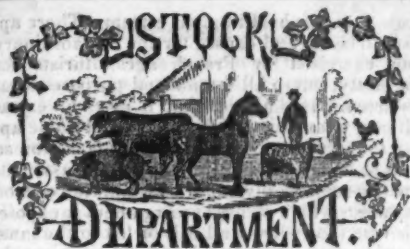
There are 56,000 species of plants on exhibition in the Museum of Natural History of Paris. The whole number of species in earth and sea cannot be less than four or five hundred thousand. These are of all sizes, from the invisible forest in a bit of moldiness, to the towering trees of Malabar, fifty feet in circumference, and the banyans whose shoots cover a circumference of five acres. Each of these have a complicated system of vessels for the circulation of its juices. Some trees have leaves narrow and short, others—as the Tailpot of Ceylon—have leaves so large that one of them can shelter fifteen or twenty men. Some exuviate their leaves annually, as a whole robe, leaving the tree nude, its bare stem towering aloft, and its branches spreading themselves uncovered in the sky; while the leaves of others drop off one by one, new ones constantly growing in place of the dismembered ones, and the tree retaining its perpetual verdure.

There have actually been ascertained, in the animal kingdom, about 61,000 species of living creatures. There are 600 species of mammalia—those that suckle their young—most of which are quadrupeds. Of birds there are 4,000; of fishes 3,000; of reptiles 700; and of insects 44,000. Besides these there are 8,000 species of shell fish, and not less than 80,000 or 100,000 species of animalcules invisible to the naked eye.

Some forms of life require a moist atmosphere, others a dry one. A blue water lily grows in the canals of Alexandria which, when the water evaporates from the beds of the canals, dries up; and when the water is again in the canals, it again grows and blossoms. And some of the lowest animals may be completely dried and kept in this state any length of time, but when they are again moistened they resume the functions of life. Some plants are adapted only to particular climates; but they do not flourish equally well in these. As a tree which, in the Southern States, attains a height of an hundred feet, at Great Slave Lake, the Northern limit at which it is found, becomes dwarfed to a shrub of only five feet high. Life, both vegetable and animal, is infinitely modified; but in all cases, its best development is only under those conditions to which it is especially adapted. "How manifest are thy works, O, God! in wisdom hast thou made them all."—[Ex.]

As we are about to enter a new period of time let every one of our readers who have not kept a diary of daily occurrences—begin with the new year, and at its close, they will find it a profitable study, and productive of the most beneficial results.





[Written for the Valley Farmer.]

# VETERINARY DEPARTMENT.

By Geo. H. Dadd, Sen., V.S., Chicago, Ill.

## CASE OF ENLARGEMENT OF THE SPLEEN.

*Preliminary.*—Cattle are more subject to enlargement of the spleen, and splenic apoplexy, than horses; and among cattle the disease very often proves fatal. This may be owing to the fact that in this country very little is known of the pathology of the disease; hence, the animal may be in a condition beyond recovery ere the disease is suspected.

When cattle are afflicted with enlargement of the spleen, they usually manifest much uneasiness, and often lay down, apparently suffering from abdominal pain; the visible surfaces of the mouth and eyes appear of a yellow tint, which would lead us to infer that the liver is more or less involved. The animal appears dull and stupid, and the appetite is more or less impaired. The most notable symptom, however, is a hard tumefaction in the left abdominal region near the last rib, and the head of the animal is often turned in that direction; he licks the part with his tongue, and will often look anxiously toward the flank.

The probability is that this disease often owes its origin to over-feeding, hence our first business in the treatment, is to withhold food.

The spleen is intimately connected with the liver, inasmuch as the former serves as a sort of diverticulum to the latter, when an excess of blood is apt to occur in the liver; so that the causes which operate to impair the function of one, may produce disease in the other.

*Report of the Case.*—October 9th, 1862, I was requested to visit a bay gelding, aged 8 years, the property of Mr. Blair, of this city. I was informed that during a period of two weeks the animal had shown symptoms of ill-health, and had been under treatment without any apparent benefit. On making examination, the following symptoms were noticed: Pulse rather feeble; respiration unaffected; visible surfaces of the mouth and eyes showed a light yellow tinge;

the head pendulous; extremities rather chilly. I was informed that the urine was ropery and the excrement hard. I practiced percussion over the region of the liver (on the right side), which elicited a rather unusual dull sound; and on performing the same feat on the left side, an almost solid sound was heard. From these sounds it appeared, as almost certain, that both liver and spleen was affected.

I treated the animal according to the best of my ability by means of alteratives, laxatives, and tonics; yet at the end of nine days my patient died. I saw him about twelve hours before death: the visible surfaces were pale; the pulse almost indistinct; the surface of the body cold; symptoms which, at this stage of disease, indicate death from internal hemorrhage. From the position in which the animal was found, after death, I presume he fell and died without a struggle.

The case was probably incurable from the commencement.

It not being convenient to remove the dead horse, for many hours, I made an incision into the abdomen sufficiently large to introduce my hand, and found the abdomen full of blood; the spleen was so much enlarged that it must have weighed from eight to ten pounds; the liver appeared to be indurated, but not enlarged. The animal was very fat, and I learned that during life he had but little to do and plenty to eat, which accounts for the disease and death.

For the benefit of the readers of the *Farmer*, I will here introduce a description of the spleen and its function:

"The spleen, known to butchers as the *milt* or *melt*, is a spongy substance, located on the left side, between the stomach and the false ribs. It presents a blue mottled appearance externally; internally, it is dark-colored.

Its internal surface is concave—by which arrangement it is perfectly adapted to occupy a locality of the stomach, which in form is convex.

The spleen, like other organs within the abdomen, receives a covering from the peritoneum, and when this covering is stripped off we discover a body soft, lacerable and spongy.

It is supposed that the spleen does not perform any secretory function, and physiologists have hitherto failed in detecting any excretory vessel, or duct; in these functions it differs from all other glands of the body—in fact, having neither secretory nor excretory vessels, it cannot, with propriety, be classed as a gland.

The anatomy of the spleen is as follows:—It is furnished with arteries, from the celiac; the celiac terminates in the splenic, and the splenic furnishes the spleen with blood (the "celiac" arises from the abdominal aorta), and these arteries after being dispersed within the sub-

stance of the spleen, and innumerable ramifications, and ultimately terminate in cells of a membranous character; from this cell arrangement springs innumerable venous radicles. The spleen being very spongy, and porous, is capable of undergoing great distension, without danger of rupture; in fact, it sometimes acquires an enormous size, without loss of continuity. The spleen is delicately organized with nerves, and presents an intricate net-work of absorbents; the nerves of the spleen are given off from the celiac plexus.

Notwithstanding the fact that the spleen does not perform the functions just alluded to, it is a very important organ, and serves as a diverticulum to the liver; when thus employed it tends to prevent congestion of the liver."

### The Different Types of French Cattle.

At the recent Paris Agricultural Exhibition, there were exhibited the French breeds of cattle, represented by 801 animals, divided among nineteen different denominations of breeds, rather than distinctive breeds.

A correspondent of the *Mark Lane* (London) *Express* says that among the above motley array of cattle, gathered from all parts of France, there appeared only six well defined types to which all the animals may be traced; and these are not only distinct from all marked and conspicuous traits, but also from the districts in which they flourish.

1. The Norman breed is chiefly characterized by its large size, big bones, ill-shaped and angular frame, and good milking qualities; it is of low growth, and hard to fatten. Crossed with the Short-horns, it yields almost entirely its bad points, without losing its good milking qualities. It was evident that many of the best specimens of this breed that were exhibited at Paris had unmistakable traces of Short-horn blood; and nearly all the prizes taken avowedly presented this hopeful peculiarity. The breed chiefly flourishes amidst the rich pastures of Normandy; which alone from their fertile and luxuriant character seem capable of supplying it with an adequate fodder at all commensurate with their enormous appetite. Under any other circumstances it pines, and soon degenerates.

2. The next type is the Flemish, chiefly bred, as its denomination shows, in the northern districts of France, bordering the Belgian frontiers. This breed is distinguished by its deep, dark, red color, with dotted spots of white about the face, and sometimes under the belly. It is a large-legged, ill-shaped, gaunt herd of cattle, a slow feeder, but excellent milker—a quality greatly prized by the French agriculturists.

3. The third type is the Breton breed. This is chiefly characterized by its diminutive size, fineness of bones, black and white color, and milking qualities. This very small breed flourishes on the poorer parts of Brittany, and is a native of the heath-wastes of that province, as is sufficiently indicated by its diminutiveness. As will be seen hereafter, this musters stronger than any other French breed, which would in-

dicate that it is held in great esteem. There appears to be several causes for the extraordinary taste exercised by French agriculturists for this pretty, but to all intents and purposes, useless breed. It is alleged that it gives an extraordinary quantity of rich milk; and some appear to carry their enthusiastic infatuation so far as to believe this milking fecundity associated with a remarkably small consumption of food—a fallacy which we need no argument to expose. It is true that when well fed, or fed to the same amount as larger cows, this breed gives a supply of milk somewhat larger than its size would lead to suppose; but this result is never attained except in the most favorable circumstances, that is, when the animal is supplied with an unlimited amount of rich and nutritious food; and we fully believe that, taking everything into account, there is no breed of cattle so costly to maintain, and so unprofitable in its returns. But it is a cheap luxury to acquire. Formerly the best Breton cow could be bought in any fair of Brittany, ranging from £3 to £4; and although fashion has given them an artificial and wholly unwarrantable value, yet with the easy sacrifice of a five pound note, any Frenchman can enjoy the luxury, and glory in calling himself the owner of a dairy cow.

The Breton cattle are, however, capable of considerable improvement. When bred on rich land, it increases greatly in size and milking properties; and when crossed with Short-horn blood, it yields a produce remarkable for its fine quality of meat, and its early maturity; but, nevertheless, we cannot call this morbid because senseless taste of the French for this insignificant breed by any other name than a lamentable infatuation, in which capital, energy, and valuable influence are wasted and lost.

4. The next type is the Charolaise, one of the most distinct breeds of France, from the fixed character of its white color and peculiarity of shape. It closely resembles our Short-horns, especially about the head and horns; and many breeders eagerly seek white Short-horn bulls for covering purposes, in order to impart to the breed early development and maturity, increase of bulk, and greater symmetry, without losing the distinctive character of the breed, viz: its white coat. Unfortunately, as every one knows, this feature is one of the greatest uncertainty in the Short-horn breed, and it often occurs that a red or roan calf is produced, to the greatest disappointment of the Charolaise breeder. This breed of cattle is chiefly reared in the department of the Cher, Nièvre, and Allier, that is, the central district of France. The tribe, notwithstanding its form, is generally a slow feeder, and bad milker; crossed with the Short-horns, its quality improves in every respect.

5. The fifth type consists in the working breed of Salers, Auvergne, and Limousin. Their color is generally deep red, except the last, which, although Comet's was red, is generally of a yellowish brown tint, similar in character to nearly all the southern breeds. These are very valuable animals for the yoke, and yielding in their old age, when worn out by labor, beef of excellent quality.

6. In the sixth and last type may be comprised all the Femeline of Franche Compté to the Maraichine, Choletese and Nantaise in the western provinces of France, thus embracing a zone which extends from the north frontier in the east to the western boundary of the Atlantic, and passing south to the Mediterranean and Pyrennes. The color of all the breeds comprised in that zone varies from the yellowish cream color of the Femeline to the rich and warm hue of the southern tribe, where the color closely resembles that of ripe wheat. Others are also of what is called badger color, that is, a pale, whitish grey, on the back, neck and head, getting darker and darker, almost to brownish black, as it reaches the under part of the belly and the lower extremities. Although some of these, particularly the Aubrac and Landaise, present some distinct characteristics, no doubt from the peculiarity of the country in which they prevail, all these breeds belong, no doubt, to the same origin. Therefore in this type may be comprised the following varieties, which we found represented at the Paris Exhibition:

1st. The Femeline and the Bressen, a mixture of Swiss and Charolaise.

2d. The Gascon, the Garonnaise, the Bazadaise, Lourdes, Mezene, Arriegeoise and other Pyrenean races.

3d. The Aubrac, and some Limousine from the mountains of Aveyron.

4th. The Maraichine, from the ten districts of the Charentes; the Parthenaise, Nantaise, and Choletaise, from the departments of Vendee and Loire Inferieure.

### STEAMING FEED FOR WORKING STOCK.

Perhaps your readers, who are practical stock feeders, may feel interested to know the manner of feeding and the results, as the experiments may prove of service to some who may desire to follow a similar plan of feeding. About thirty animals, young and old, were fed six months or more with cut hay, steamed and mixed with ground oats and shorts. The hay was cut short and placed in a tight box, and boiling water poured over it, the cover of the box being closed for twenty minutes, allowing the hay to soften by the steam; then the oat meal and shorts, and a slight dash of salt was added, and fed warm in quantities suited to the age and condition of the animal to be fed. Good hay was mostly used, but straw, refuse hay, and chaff treated in this way were eaten with avidity. Here was the trouble as I believe; the stock were more eager for the warm food, and many of them bolted their allowance in a few moments. The result was that such ones in a few months plainly showed the effects of such hasty feeding. Loss of appetite and spirits plainly indicated dyspepsia. The coat of these animals looked unusually sleek and fine all the time;

but their power to endure a day's drive, or courage to perform ordinary exertion, was much impaired. Quite a number of horses treated in this manner show no material alteration, yet I feel fully convinced that continued feeding with warm shortened feed would reduce their digestive organs to a like weak state.

Having shifted my method of feeding to long hay and dry unground oats, fed in such a manner as to insure deliberate mastication as much as may be, I think I may safely say that the result was satisfactory—restoring the wonted vigor and endurance for hard and continued efforts. If I had coarse fodder which it was desirable to consume, I should prefer to keep the stock colder—more exposed in cold weather, creating an appetite for such food rather than to make it tempting by cutting or mixing with meal at the expense of their health. Health is all-important in an animal of which so much powerful exertion is expected. Any one ever so slightly acquainted with the practice of feeding, in training for the tremendous exertion of trotting and running, knows that long hay and dry unground oats and cracked corn are mostly used; and many careful feeders strip the hay of all seed, and feed oats a few handfuls at a time, distributed over the bottom of the manger, that time may be afforded to thoroughly reduce the food before swallowing. This most certainly induces a healthy state of the digestive organs, and prepares the animal for violent labor.—  
[*Cor. Boston Cultivator.*]

### WHEN TO FEED WORK ANIMALS.

It is, we think, generally admitted, that work animals do not need as much solid food when lying idle as when steadily at work. But we think that there is a grievous mistake frequently made in giving work animals that have lain idle a good hearty feed just before going to work: For instance, to give a horse an extra mess of oats in the morning, and as soon as he is done harness him up and go to work. Now, we think this is little or no benefit—for the horse has to carry about with him a large mass of undigestive food, which has not had time to pass into a condition to be of any benefit to him, except to fill his stomach. A little reflection will enable any one to see that this is not right.

An animal which has been idle should be fed an extra quantity for several meals before going to work. And this applies especially to oxen, from the fact that they merely crush their food a little to swallow it. An extra feed does them almost no good at all, if worked immediately



after it. They depend upon raising their food and chewing it over again, and if they are worked, they do not get a chance to do so; as a consequence the greater part passes off without doing them any good, as most farmers know. If we feed oxen a certain quantity of grain per day, we prefer to give three-quarters of it to them at night. They can then get a chance to thoroughly masticate it, and almost none is lost.

This mode of feeding, we think, is preferable to any other, except grinding their feed; and that will not pay if corn is 20 cents per bushel, and you have to haul it ten miles to mill. If a mill is convenient, or if a person has a horse mill, it is undoubtedly the best—but it is an undeniable fact that our West corn is almost always fed in the ear. If fed at night, an ox gets the good of it—but if fed at noon, or in the morning, we think it does not do them near so much good.

This may seem to be a trifling matter, but if trifles are well attended to, important matters are not likely to go wrong.—[*Iowa Homestead.*]

#### Blindness Among Horses—Its Causes.

This is a subject of very general importance. It has been stated that blindness is more prevalent among horses in America than among those of other countries. If this is the case, the causes of the evil should be investigated and removed if possible, without delay. The last number of the *American Stock Journal* contains a good article on the subject, the leading ideas of which we have condensed for our columns. It states that blindness is more prevalent among horses in Ohio than those of any other section of the country. The cases of blindness are attributed, in a great measure, to over-feeding—the Ohio horses being notoriously fat. It is a common practice in that State to force the fat upon horses intended for sale by stuffing them principally with Indian corn, and keeping them, without much service, in warm, close stables. This method of feeding soon fattens a horse, but at the same time its digestive functions are injured by the treatment. It is now believed that the blindness can be traced to a sympathetic relation between disorder of the digestive organs and the brain, and that through the latter the optic nerve becomes diseased and ends in destroying the vision. Blindness is also frequently transmitted to offspring, and thus an evil, first originating in disease, almost becomes a natural defect by hereditary descent. Errors in feeding horses, as is well known, also

produce blind staggers, stomach staggers, and organic disease of the brain; therefore the greatest care should be exercised in feeding them.

In order to prevent the spread of horse blindness, it is recommended that whenever an animal shows the least symptoms of the disease it should be kept on a light diet of hay and oats. A horse may be maintained in good condition on 12 pounds of hay and 5 pounds of oats for daily feed. In breeding horses it is also recommended that all animals showing the least symptoms of organic disease be rejected.

One of the first symptoms incident to blindness—which any person may readily notice—is the disposition of the animal to raise his fore legs unnecessarily high, while, at the same time, the ears are drawn backward and forward in quick succession, thus giving evidence that the sagacious animal is sounding the ground over which he travels.

These are the principal ideas advanced by our contemporary respecting the cause of prevalent horse blindness in our country, and the mode of arresting a spread of the evil. There are some other causes of this disease which appear to us more evident, and which are perfectly capable of removal. Blind horses are more common in cities than in the rural districts. This we consider is principally caused by bad stables. Many of them are under-ground cellars, and, with few exceptions, all stables are too small. They do not admit a sufficient quantity of fresh air for ventilation and respiration, and this always tends to injure the health of the animals. Light is as essential to the health of horses as that of men, and yet most stables are nearly as dark as dungeons. Several years since, a great number of valuable French cavalry horses were attacked with glanders and other diseases, of which they died. It was recommended that more spacious stables should be erected. The suggestion was acted upon, and, with improved army stables, there is not one-fourth the cases of sickness now among the French cavalry horses. This fact is invaluable. It would be far better for most of the horses in our cities to be kept in open sheds than in the stables commonly provided for them.

We are also positive that eye-blinds on the harness tend to injure the eyes of horses, and, as they are totally useless and unsightly appendages, they should be abandoned entirely. We are aware that, of late, the open bridle has become more common, but it should be universal. Tight, close collars, which squeeze the eyes of horses in putting them on, are also very injurious to the eyes of the animals. We have known

one case of permanent injury to the eyes of an excellent horse from this cause. Carriage and draught horses should be provided with divided collars, secured either at the top or bottom, so that they are not required to be forced over the heads of the animals.—[*Scientific American*.]

#### Care of Cattle in Switzerland.

If there is one thing in which the Argovian takes particular pride, and in which he particularly excels, it is in the care of his cattle. They are elephants in size, and their glossy hides betoken some peculiar art on the part of their masters. Not a particle of dust or straw is allowed to cling to them, and they are combed and washed as only horses are elsewhere, not with a *curry-comb*, but with old cards, which, being finer and softer, are more agreeable to the animal, and improve the fineness of the hair. This receives an additional lustre by being rubbed with old flannel. They actually shine; and the gentle creatures have an evident consciousness of their beauty, for they are careful not to soil their ashy grey and chestnut robes by lying in the mud when allowed to take a walk. Animals can acquire, if they have not by nature, a fine sensibility, and when they have once experienced the pleasant sensation of cleanliness, learn to take care of themselves. Not only do they exercise this care for the person of the animal, but are at the pains of removing every feather and unpalatable substance from their food; and the water troughs from which they drink are kept as clean as if human beings resorted to them. If anybody doubts the efficacy of these means, let him come and see not only how large, but how intelligent these dumb animals look; how they watch every motion of those who talk to them, and listen to all they say. What an affectionate moan they will utter to welcome the milkers, who are always men, as they say, "women tickle the cow, and never take all the milk from the udders, so that they give less and less." It is said of them that an Argovian will send for the doctor for his cow a great deal quicker than for his wife; but we did not see any evidence that he was not sufficiently attentive to both.—[*Miss Johnson's Cottages of the Alps*.]

**TO CURE KICKING COWS.**—We find the following in an exchange, without any indication of its paternity:

1. Never allow the slightest degree of heat or passion, or departure from perfect self-control.
2. Never strike the animal but once at a time

—no matter what the provocation may be; a single, sharp cut with a switch (kept under the left arm) excites fear and alarm—two or more strokes produce a re-action, and cause rage but not fear.

3. Adhere faithfully to the principles of cause and effect, and the animal will quickly understand these principles, if the single alarming stroke always instantaneously follows every attempt to kick.

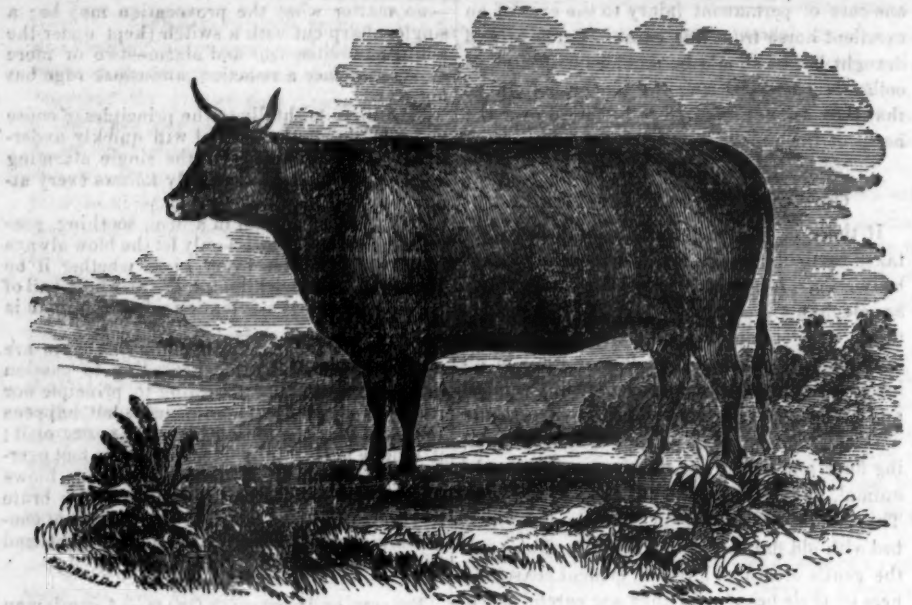
4. Treat the animal in a firm, soothing, gentle manner at all times—only let the blow always come quickly after every kick; whether it be merely an abortive attempt, or the whole pail of milk is upset—the intention of the animal is the same.

I do not wonder that so many fine cows are spoiled, that are treated according to passion and caprice, and not according to principle nor rule. If a cow kicks maliciously, but happens to hit no one, the milker takes no notice of it; if a mere accidental movement of the foot overturns a pail of milk, a shower of furious blows follows, and it becomes impossible for any brute to know, from such irregular practice, what connection there is between the punishment and the offense.

**EFFECTS OF HUNGARIAN GRASS.**—A gentleman from Will Co. relates to us the following as being the experience of one of his neighbors.—Having grown and fed considerable of it to his stock the present season, several of his horses became stiffened and almost useless—one, a fine mare died. Determined to know so far as possible what ailed her, he opened her and examined her thoroughly, and discovered in her stomach a ball of Hungarian grass seed, weighing from seven to eight pounds, so hard that it was with much difficulty it could be broken apart. Acting on this discovery, he gave his other horses a dose of castor oil, when very soon masses of seed were passed from them, apparently parts of such described balls, some pieces as large as eggs.

**A TRAVELING DOG.**—Here is a dog story told by the Randolph (Mo.) Citizen. If our friend of the Citizen did not possess such an unassailable reputation for veracity, we shouldn't know how to take it. Remarkable as it is, however, we accept it as true:

A few weeks since, a family living in this county went to Kentucky on a visit and carried with them a common cur dog. When they arrived in Louisville, the dog became frightened at a car, and ran off from the party, which was the last seen of him. In about nine days he made his appearance at the homestead in this county! This is a remarkable instance of canine sagacity. The family traveled through to Kentucky by land, crossing the Mississippi at Alton, and the dog doubtless returned by the same route, swimming two or more rivers, and guided solely by his instinct.



A representation of the Devon Cow, BEAUTY, owned by Dr. W. W. HENDERSON, St. Louis Co., Mo.

#### DEVON CATTLE.

We recently paid a visit to our friend Dr. W. W. Henderson, near Bridgeton, St. Louis Co., Mo., and were highly pleased with his fine herd of Devon cattle. He is paying much attention to this breed, and is highly pleased with it. It is one of the most hardy and docile breeds we have. The following are the leading characteristics of this breed:

"The bull should have yellow horns; clear, bright, and prominent eyes; small, flat, indented forehead; a fine muzzle; small cheek; a clear yellow nose; a high and open nostril; a thick neck, with the hair about the head curled; a straight back; and be well set upon the legs. The head of the ox is smaller, otherwise he does not differ materially in shape from the bull. He is quicker in his motions than any other ox, and is generally docile, good tempered, and honest.

"The cow is much smaller than the bull, but roomy for breeding, and distinguished for her clear round eye, and general beauty of features. With regard to the comparative value of the Devon cows for the dairy there is much difference of opinion, it being pretty generally asserted that their acknowledged grazing qualities render them unfit for the dairy, and that their milk is rich but deficient in quantity. Many superior judges, however, prefer them even for the dairy. Both cows and oxen fatten faster and with less food than most others. In color Devon cattle are generally red.

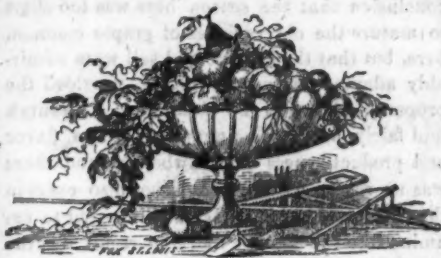
"Our New England cattle, as we have said, are generally derived from this breed. Their horns are moderately long, smooth and slender, and their prevailing color deep red; but sometimes they are dark brown, brindle, or nearly black. The oxen are remarkable for their docility, strength and quickness. The cows are fair milkers. Both oxen and cows fatten readily."

**JEWELS IN SHEEP'S EARS.**—Mr. H. G. White, of New Hampshire, has published his mode of marking sheep, which is quite a novel plan, but we think a pretty good one. His method is to make a hole in the lower margin of one of the ears and near the head. In this hole he suspends a copper or zinc label, with a number or anything else stamped upon it he wishes. The label is circular, three-quarters of an inch across, and is suspended in its place by means of the common split steel rings, used for carrying keys on; or galvanized wire may be used for the rings.

This mode may not be quite so cheap as cutting or slitting, and there is a possibility of its being lost or taken off, but where you wish to number the sheep with reference to a register or other purpose, it must be very convenient.

**BARLEY FOR SHEEP.**—A correspondent of the London *Mark Lane Express* thinks that his experience warrants him in asserting that barley fed to sheep is a preventive of the rot—a disease which, owing to the wet weather in fall, had been very fatal in England in the winter of 1860.





## HORTICULTURAL.

### THE CATALPA TREE.

With proper management in the early culture of the Catalpa tree, in the nursery, it may be rendered one of the most beautiful of our deciduous ornamental trees. It grows with broad leaves, casting a complete shade; is free from insects, and in spring or early summer is covered with large clusters of the most beautiful and fragrant flowers; and from midsummer to the close of the year the long pendent seed-pods present a novel and interesting appearance. But as the tree is usually allowed to grow, it is crooked and ill-shaped. In the propagation of ornamental trees we made an effort to overcome this habit in the Catalpa, and succeeded admirably, growing straight, tall, well-formed trees, with perfectly balanced heads. A correspondent familiar with this fact has requested us to detail our method of cultivation which has secured such desirable results, in this otherwise beautiful tree.

Our method is to grow the plants in the seed-bed, or nursery rows, in the usual manner, by planting the seed in the spring, as early as the ground is in working order. At the end of the first season, if the seedlings stand too thick, they are thinned out and "extended." In the propagation of deciduous trees, as in evergreens, we find advantage in occasional transplanting, or as a substitute in slightly root-pruning, by digging a trench alongside of the rows and shortening the outer extremity of the longest roots, in order to multiply the fibres, and to cause the roots to grow more compact within suitable compass to insure their more perfect removal at the proper period of final transplanting.

The seedling Catalpa usually requires to stand three years in the nursery before it is of sufficient size to be removed for a shade or ornamental tree. In the spring, after the second year's growth, the trees are cut down nearly level with the ground, and the most vigorous,

leading shoot preserved to form the new top; all the other buds are rubbed off. During the early part of the season, the rows are well cultivated in order to secure a rapid growth. In good soil, with proper attention, a strong, perfectly upright growth of eight or ten feet in height is easily produced, of sufficient size to be removed to their final position in the following spring. Thus, by securing a strong growth from the ground in one season, the crooked and deformed habit of the tree is entirely corrected, and at the end of the fifth year from the seed, the tree may be trained in such perfect proportions and symmetrical habit as hardly to be recognized as belonging to the family.

\*We have grown the *Paulonia imperialis* in the same way, from ten to fourteen feet in height, in a single summer; but as this is a semi-tropical tree, so rapid a growth is seldom sufficiently matured to withstand the cold of the following winter without protection. These in the fall we usually take up, and bury them root and branch, and then remove them in the spring to their place of final destination, when by another summer they will become as hardy as that tree ever is in our climate.

[Written for the Valley Farmer.]

### The Color and Culture of Apples.

Apples, this year, here, are more deeply tinged than we ever knew them before. The sun does this. Not more pictured are the leaves of autumn. The same principle (the sun) refines also the flavor and the grain of the fruit.

It is a positive pleasure to walk in an orchard—limbs bending down with fruit that actually seems to flame, or is blood red, and shiny as a shell or ivory. Then there is the golden yellow—"Touch me not," it almost says. And the great sphere, like a pumpkin, coarse and rough, as if the bark of the tree had been extracted to it. And then it is sweet to hear the little folks, holding such spheres with both hands, call them "cheese-brooks." They always pick for the biggest apples.

Trees carefully pruned, with good judgment, does much towards bringing such fruit. Growth checked when too thrifty; trees fed when retarded: this is what is wanted. Liquid manure is the readiest. Holes should be made by a long, thin-tined fork in different places under the tree, and the liquid poured over. The effect is instantaneous.

A good way is to mulch with manure. In this case coarse manure is best, providing always it is not new, not raw. I have known

manure, fresh from the stable to kill apple trees, where the soil was leachy. Otherwise, if the top-soil retains the fertility, puncture the ground. The heavy rains will fill punctures with the juices, and you will have your mulch besides.

Mulching of some sort seems almost indispensable. But avoid a too heavy growth for fruit, for substantial bearing. To this end, thin out both fruit and foliage—foliage if there is lack of quantity (of fruit); fruit if there is excess of number.

Sometimes lime, ashes, bones, or some other fertilizer, will make a tree bear. I have known the carcasses of a few dead lambs, buried in different places under the tree, do this: not immediately, the carcass must first be decomposed. They should be buried two or three yards from the bole of the tree, with but a few inches of top soil on them. This will give the heat a chance. Old or mature trees, alone, should be treated in this way. They will stand more abuse, and thrive better under good treatment. A young tree is a tender thing, like most young things.

F.G.

#### Knox's late Grape Exhibition.

We promised the other day to say a few words about the late grape exhibition held at the Horticultural rooms of Rev. J. Knox, Fifth street, but have until now lacked the time. It is not yet too late. This exhibition marks a new epoch in the history of grape culture in this region. Until lately, our people not seeing any abundant or profitable returns for their labors, took but little interest in growing the grape, either for the table or for wine. The varieties planted were only the Catawba and the Isabella, and these, unless they obtained very thorough cultivation and close attention, or unless they were planted with a sheltered and southern aspect, very rarely compensated for the space they occupied. The fact is, the season was too short to properly mature the fruit. It has only been within a couple of years that any of the noble and delicious fruit of the vine was offered in our markets. The grapes generally were small, sour, unripe, ill-conditioned, and not at all tempting in appearance. They were either unbought altogether, or the purchaser begrudged five cents per pound for them.

That we have a different state of things now is chiefly due to Mr. Knox, who is the pioneer for the introduction of almost all new and choice varieties of small fruits into Western Pennsylvania. Several years since he was led to the

conclusion that the season here was too short to mature the old varieties of grapes common here, but that the climate and soil were admirably adapted for grape culture, provided the proper kinds could be obtained. Pittsburgh had fairly beaten Cincinnati in the size, flavor and productiveness of strawberries, and there was no reason why she could not also excel in the culture of grapes. He was thus led to examine into the matter, and the result was the purchase and culture of several varieties of native vines which began to be much talked of in the East, but which had never been seen in these regions. Large plantations were made of the Diana, Rebecca, Herbemont, Elsingburg, To Kalon, Union Village, but chiefly of the Concord and the Delaware. These two varieties, Mr. Knox was satisfied, would best suit our climate, would prove most hardy and productive, and would grow the largest, finest, most luscious and most profitable fruit, either for the table or for wine.

That his judgment was not astray, most of our citizens who have been purchasing during the last six weeks the berries he exposed in market, or who witnessed the late exhibition, can abundantly testify. Never before were clusters of grapes of such largeness, rich bloom, uniform size, and delicious lusciousness, offered in our market. Twenty-five cents a pound were readily given for Concords, when formerly ten was begrudged; while the Delawares, although a much smaller grape, brought even more, on account of their delicate and exquisite flavor. The Concord and Delaware, among grapes, are what the Bartlett and Seckel are among pears, without a parallel or an approach for lusciousness and flavor.

Dr. Grant, the celebrated grape grower of Iona, N. Y., has unaccountably put the seal of his condemnation upon the Concord, giving his preference to the Diana. It must have been because his Concords did not suit his soil or climate, or did not flourish under his treatment, for certainly all those who saw the large and rich clusters of this grape which were exposed for one week in Mr. Knox's window, will gladly attest that never was seen here any native grape which could approach it in appearance, while in taste it combined all traits which are desirable in a table grape.

For wine it is probably not so good as the Catawba or Delaware. This last grape, as grown about here, is very sweet, juicy, and of exquisite flavor, and on account of its richness in saccharine matter, it is thought will make the standard wine grape. It has not yet been sufficiently tested, however, to enable one to say whether the probability is that it will ever supply the place of the well known and esteemed Catawba.—[Ex.



### THE LAWTON BLACKBERRY.

One of our most healthful fruits is the blackberry. It should be cultivated for its healthful properties, if for no other purpose. Its use will ward off disease, and thus save pain and the visits of the family physician. It is strange that so many of our people are blind to the importance of cultivating fruit. They do not consider that a few dollars expended in purchasing fruit trees and small fruits will in the end be one of the best investments they can make—that they had better buy fruit trees than pay the same amount to the physician. Fruit is almost a necessity to the human system. It is sought for by all. How children hunger for fruit! How cruel it is to deprive them of it! We feel that if we can be instrumental in in-

ducing farmers to plant fruit trees and the small fruits we are doing a great good, and we shall continue to urge upon them the importance of doing so. Go to your nearest reliable nursery and buy a good assortment, and plant them out carefully, and our word for it you will never regret it.

The Lawton Blackberry, figured above, should be planted by all means. We have raised clusters of the fruit fully equal to the above description. It is not only desirable to raise it to be eaten when ripe but it makes an excellent family wine. This can be made with great ease. It likewise makes one of our best cordials, highly esteemed for summer complaints. The berries can be put up in cans and kept as good as when



picked from the canes, for a year or more, and then converted into pies or eaten as a dessert. In view of the many uses which can be made of the fruit, of its great excellence and healthfulness, we can confidently recommend every family to put out at least a hundred plants of the Lawton Blackberry. We have fully tested it in this climate and find it to thrive well and to produce an enormous crop of excellent fruit, if allowed to remain on the vines till fully ripe. The plants should be set out in rows eight feet apart and about four feet apart in the row.

[Reported for the Valley Farmer.]

### Meramec Horticultural Society.

EVERETT, November 6th, 1862.

The forty-seventh monthly meeting was held in the house of Vice-President Beale. The President in the chair.

The minutes of the former meeting were read and adopted.

One new member was admitted.

The report of Committee on late peaches was called up; a verbal report was given. Only one new peach was discovered in the locality—the Howard Pound, grown by Mr. Craig, near Creve Cœur, said to be a large, fine, late, white, free peach.

Mr. Redfield stated that he had seen a very fine white-fleshed peach, quite late in ripening, grown by Mr. Hugh Barton, St. Clair Co., Ill. Committee discharged.

#### REPORT OF COMMITTEE ON FRUIT.

The Committee finds a good display of the fruits of the season submitted to their consideration.

From Mr. Jabez C. North, extra large and finely colored specimens of Pryor's Red, Wine Sap, Herefordshire Pearmain; and the Belmont, an exceedingly large and fine looking apple, especially worthy of attention as a market fruit.

From Mr. P. M. Brown, Ortley, Yellow Bellflower, Rhode Island Greening, Pryor's Red, and three varieties not identified.

From Mr. T. R. Allen, Rambo, Pennsylvania Red Streak, Priestly and Newtown Pippin.

From the Secretary, Clyde Beauty, Janeton, Milam, Hughes' Cider Crab, Peck's Pleasant, Lemon Pippin; and the Winter Nellis and Glout Morceau Pears artificially ripened.

From Mr. John S. Soyemour, the Orange and Anger's Quince.

From Dr. Beale, the Portugal and Orange Quince, and Easter Beurre Pears.

From Mr. L. D. Dotaw, samples of the Sorghum and Imphee Syrup.

Mr. Parker Airey proposed as a subject for discussion at next meeting, "The Standard by which we judge of the Character and Quality of Fruit." Adopted.

Adjourned for dinner.

The report of the Committee on Pruning was called up, when the chairman of the committee stated that the subject had been found one of such vast extent, leading into so many details, and affected by such a variety of circumstances, that it would be desirable to extend the observations over another season at least before any decided results could be announced.

An exceedingly interesting conversation was had upon the subject, in which most of the members participated.

The President announced the next meeting (the Annual Meeting for the election of officers) will be held in the School House, Allenton, on the first Thursday of December, at 10 A. M.

WILLIAM MUIR, Sec'y.

[Written for the Valley Farmer.]

### The Mo. State Horticultural Society.

[Proceedings concluded from Nov. No.]

President: Mr. Quinette's plan keeps the weeds down and gets them out.

Mr. Pettingill: I fall in with Mr. Quinette's plan; I have tried both plans, and have had a bed 8 years.

Mr. Mudd: I planted  $\frac{1}{2}$  of an acre of strawberries on my place. I mow the weeds down and leave it for 5 years in the bed, and the crops last year were equal to the other two years.

Mr. E. B. Colman: I like Mr. Quinette's plan best, but I think he does not get such large fruit.

Mr. Sanders: There is great difference in the growth of varieties, which will cause a difference in the treatment. Washington throws out runners at every 4 to 10 inches apart. There is a great difference in the runners being rooted and allowed to bear fruit. Mr. Quinette's plan leaves everything on the ground, and is equal to mulching. I would not let varieties that occupy the ground like the Washington remain more than about one year. Hovey's Seedling and Downer's Prolific give a much larger crop and keep clean better by mulching.

Mr. E. B. Colman: The system of mulching is the best I have heard of. I have tried forest leaves and manure; where I put most manure I had the best berries.

#### MONROE SCARLET.

Mr. Pettingill: I have a strawberry called Fillbasket. It is a large strawberry; a half larger than the Wilson's Albany. Light red, rather soft, is not so acid as the Wilson, is like the McAvoy. The footstalk 6 to 10 inches long; a good bearer; berry conical, like the Necked Pine. It bears about twice as much as any other variety. It has the largest Blossoms I have ever seen, many of them will measure 7 inches in circumference.

#### WALKER'S SEEDLING.

Mr. E. B. Colman: I remember the Austin Seedling was said to be 6 inches; a gentleman offered \$100 for every berry 6 inches, but none came out.

Mr. Quinette: I raised one strawberry that measured  $6\frac{1}{2}$  inches.

E. B. Colman: Walker's Seedling is very dark red, nearly black when quite ripe, a very delicious berry, superior to the McAvoy. I took at one picking about  $\frac{1}{2}$  of the crop, and it measured at the rate of 210 bushels to the acre, and might be 300 bushels to the acre. Fine, evenly sized berries, about  $3\frac{1}{2}$  inches in circumference.

Mr. Quinette: I have Walker's Seedling, good bearer, fair size, good berry if cultivated well.

Mr. N. J. Colman: I have Walker, and it is far below some other varieties.

#### THE WASHINGTON.

Mr. E. B. Colman: It ripens a few days earlier than the other varieties.

Mr. Sanders: I regard it valuable for its earliness and productiveness. It is acid, without the strawberry flavor; it is water and acid. Its real value is, it is early. If you keep out the weeds the first year you may have a bed for 14 years; it covers the ground completely the first year.

Mr. Mudd: The Washington is the only variety that has really done me any good.

Mr. Quinette: I can sell 3 acres of Washington for one of Wilson. I have not had a man call for the Wilson more than three times.

Mr. Sanders: I think if a man called for a strawberry he would ask for McAvoy.

#### DOWNER'S PROLIFIC.

Mr. Pettingill: I have only had it for one year; it has done remarkably well for that time. Fine, conical, bright red, in flavor much ahead of the Wilson; would have no better for my own use.

Mr. Sanders: We got plants from Downer, they were planted too thick and ran together, and did not show its true character; it was productive, berry large size, beautiful color, obtusely conical.

Mr. Mudd: I got 100 plants last spring, and they have covered the ground as completely as can be. I got a few berries and think them much sweeter than any other.

#### CUTTER'S SEEDLING.

Mr. E. R. Mason: I want to call attention to this new variety, originated in Massachusetts. I planted out fifteen hundred; I never saw so fine a growth as they made, although they were late in being planted; and I got quite a respectable crop of fruit that gave me much satisfaction. A neighbor planted out 1000 at the same time, and he is equally well pleased with them.

#### RASPBERRY.

Mr. Pettingill: I cultivate the raspberry for family use. I have 7 to 8 varieties; doubt if we have the true Red Antwerp. I have 4 to 5 varieties of the Red. The Allen is held as the best berry of the Reds, a larger berry, greater bearer, finer flavor. This last summer the fruit was very imperfect and the crop quarts instead of bushels; as to fruit it seems to be worthless. The Ohio Everbearing very fine in every respect but quality. I got a variety from Mr. Lawton which he has had in his family for 15 years; very fine in every respect, but tender. Brinckle's Orange does well, but tender unless covered during the winter, but quite prolific; the original plants are very prolific, but the suckers from these are very poor bearers; don't get one berry in 500, and the same difference in the other varieties.

Mr. N. J. Colman: I have seen it stated that the Allen was deficient in stamens, and did not set the fruit unless planted along with other varieties that bloomed at the same time: This is the doctrine that Mr. Allen maintains.

Mr. Pettingill: This I doubt from some observations I have made. The Ohio Everbearing has been the best with me for a number of years; in July or August and till the middle of November you get fine fruit; the stems for two feet long are full of berries. I plant 4 to 5 feet between the rows and 6 feet between the stools. The fall bearing is upon the same season's growth, some of which are ten feet long, making many lateral branches which sometimes strike the ground and take root. I sometimes stake them up and keep the ground covered with straw, about 4 to 6 canes are left. I never found the mulch keep the ground too cool in spring. The raspberry tends to throw its roots up to the surface.

Mr. N. J. Colman: Dr. Hull said he twice lost his mulch by fire, and lost all upon 2 or 3 acres.

Mr. Pettingill: I have been sometimes fearful of fire. I use straw or prairie hay. I get hay for \$2.50 per ton, and straw at \$1 a load.

Mr. N. J. Colman: I think it a good plan to remove the mulch in the spring till the ground gets warmed up, and when the weather gets hot put it on again.

Mr. Pettingill: Three years ago I put 6 inches of mulch; it has decayed, and is now about 2 inches thick.

Mr. N. J. Colman: The purple cane is a variety of the Black Cap. I have cultivated it with much success. It propagates from the point of the shoot; the cane is purple with a gray bloom. The berry is of the finest quality, but too soft for market. It is the best berry we have for family use, is as hardy as the Black Cap and much more juicy. I don't know its equal. We call it American Purple: It is called the Purple Cane because of the color of the cane.

Mr. Cousins: I have had the American Black Cap in cultivation for many years, and I find that where the trees grow they do best; the canes are purple in the shade.

Mr. N. J. Colman: Mr. Betts got some of the American Black Cap Raspberries from Mr. Cousins, and a year or two after he said they turned into the American Purple Cane Raspberry. How it can change from the firm Black Cap into the soft, rich Purple Cane I don't know. I have observed much difference

in the character of the fruit here and in Cincinnati.

Dr. Claggett: I don't think the two varieties run into each other.

Mr. Sanders: The Purple Cane is simply a variety of the Black Cap. The Ohio Everbearing has the same origin; go to the woods and take up 100 plants and you may have 50 varieties with their differences all more or less well marked. I think the Purple Cane a variety so distinct that however you propagate it, it will remain distinct, and is the same with all distinct varieties.

Mr. Votaw: I don't know anything of the varieties of the raspberry, but many years ago I planted out from the woods 20 plants of what I took to be one variety; the stems became nearly of all colors and my mother picked fruit of different colors. The stems change much by cultivation; from strong canes, in 2 years, they become slender, and from being dark to light.

Mr. E. B. Colman: If this propagating from the tips makes the fruit soft, I don't want to do it. There was a variety in the woods called the English Cane or English Red Cane; it did well, was a fine bearer, the only one we had for some years, they were re-produced from suckers for years. I had a neighbor who had berries from—, and they did well; they were sent to Peoria and sold at 40 cents, when the Black Raspberry sold at 10 cents. Last spring I got from Mr. Knox a quantity of Doolittle's Improved; got small plants, and on looking at them, some were from the points and some from the buds at the roots. I commenced layering them; some took root, and some not. I took the knife and slit the bark, and in the fall they rooted finely, some in November making fifteen feet, making a thick growth. I laid them down. These I presume will come out in the spring, and if not they will strike root the next season. I think this is a good plan for those who want to propagate fast.

Mr. N. J. Colman: This don't agree with Mr. Doolittle's theory at all. He says distinctly, you must propagate it from the tips alone. I don't say this is correct, but it is his theory.

President: My view is that we must look to American varieties and species and for general culture we can have the native raspberry.

#### OHIO EVERBEARING—BELLE DE FONTENAY.

Mr. Pettingill: I have cultivated the Black Cap for 20 years, and have selected the best plants that I could find in order to get something superior. The Ohio Everbearing is the others together.

Mr. N. J. Colman: There is such a difference in soil it is hard to decide on the individual merits of mere varieties.

#### BLACKBERRY.

##### LAWTON OR NEW ROCHELLE.

Mr. N. J. Colman: At Alton, Mr. Booth speaks highly of it, finds it productive and profitable. Mr. John S. Seymour, at Eureka, has grown it extensively, and finds it productive and profitable. Dr. Stevens has it, and makes \$400 to \$500 per acre from it. I have it, and from my experience and observation can recommend it.

Mr. Cousins: It takes a large piece of ground off a small place. Less than 8 feet apart does not do; canes make 12 feet in length.

Dr. Claggett: My experience is not favorable. I planted it for a fence to other fruit, and it would not make a fence or fruit; it is too acid; more acid than the others.

President: I have examined them in our market, and the fruit is hardly ever ripe; when ripe it is very black and is sweet.

Mr. Sanders: I think the Wild Blackberry is as liable to be winter killed in some sections. If the Lawton is winter killed it will spring up again. It is a good bearer, and is a certain crop.

President: I have seen the wild two to three weeks earlier than the Lawton.

Mr. E. B. Colman: I have had it from Connecticut and Toledo; don't think it worth picking; I have

cane enough to produce bushels, and don't find many berries. I have examined the fruit in our Society and in market.

Dr. Beale: I have lived 5 years beside Mr. Seymour. I think he still gathers a better crop every year. When ripe, they are sweet. I have cultivated them for some time for family use. I know they can be taken to market 30 miles in good condition.

Mr. Pettingill: I don't cultivate it extensively, but my experience coincides with Dr. Beale's; they are fine in appearance and quality; I plant 5 feet between the rows and 4 feet between the plants; try to leave 3 to 4 canes in the stool in August. I go over them with a knife, and cut the canes to 6 or 7 feet high; by that means I form a fine head. They throw out lateral shoots in early spring; I cut back the laterals one-half; the canes are in an upright position; I don't tie the canes. I mulch the ground, and don't think it can be made too rich; mulch with straw; from 40 bushes I get 20 bushels of fruit. When I got the fruit first, I thought when it was black it should be eaten, but did not like it. We soon found, however, that it must remain till it is perfectly black, and now think them the best we can eat. I can gather 10 quarts in about half an hour. Before I lift the young plants I cut them back.

Mr. N. J. Colman: The berries, when fully ripe, are delicious, large, sweet, juicy, better than any wild berry I have ever eaten. As to marketing them, they are gathered in quart boxes, which are put up in cases of 40 or 60 quarts; they are hauled to the depot in ox wagons, and sent in by rail 30 miles in fine condition.

Dr. Claggett: If we examine the Blackberry in the woods, the canes grow up in a little thicket, and collect the leaves, which act as a mulch, and we find such fruit rich and juicy, and this treatment of the Lawton may produce the same effect.

Mr. N. J. Colman: This does not account for the difference. Mr. Seymour does not mulch.

Mr. Jewett: I live upon the bank of the river, upon a bluff; it is quite steep; there is much rich earth upon the ledges where the rocks are thrown down from an old quarry place: there the Blackberry grows in great luxuriance; the canes lie upon the rocks; you can gather 3 pints a week from a single cane. They ripen about the 12th of June, about 4 weeks before those in the woods.

Mr. Quinette: I have a plant that beats the blackberry; it bears about twice as much as the Lawton, and ripens about 2 months before the blackberry. I obtained it in the South, where it does extremely well; have not tested it sufficiently here, but so far it does very well. It is in quality between a Dewberry, Raspberry and Blackberry.

Mr. Pettingill: I find that half of the plants sold through Missouri for the Lawton, are but poor common blackberries.

#### DEWBERRY.

An informal discussion was commenced, during the action of a committee, upon the Dewberry. The President remarked he would like to have been able to have it discussed; he had seen the fruit in market, and found that they were raised by a person about Corondelet.

Mr. N. J. Colman: Said that the culture of this truly excellent fruit was attracting considerable attention, and he had succeeded in finding that a gentleman in the neighborhood of Belleville had been cultivating them for some years, as also a Mr. MacElroy, near Charondelet, who made it a very profitable business. Dr. Stevens has put out the plants; they are put up on trellis, and pruned back. It seems they want poor soil. I have seen in old wheat fields, that have lain idle 3 or 4 years, the dewberry in great plenty, and an inch and a quarter in length; would like to get an account of the manner Mr. MacElroy manages his plants.

Mr. Pettingill: Has tried to cultivate the Dewberry, but did not succeed, it ran too much into wood; tried it every way I could think of, and the same with the

Wild Blackberry. I used lime freely to check the wood growth and throw it into fruit, but could not do it.

#### GRAPES.

##### CONCORD.

Mr. N. J. Colman: I have seen it grow; eaten the fruit, partaken of the wine. I conceive it the best grape in cultivation for the million; it is the hardiest; it can be cultivated with less care and attention than any other variety. It is the most productive; it is less liable to blight or injury from insects; it is earlier than the common varieties, and will command a higher price for table use. Had the wine from Mr. Husmann, which pleased me very much. While the Catawba and Isabella are much affected by the season, the Concord is always good, and the leaves are green and healthy till frost.

Mr. Pettingill: I think very highly of Mead's Seedling. It is cultivated much in Illinois, where it has taken the premium as the best table grape. I saw a gentleman who cultivates it; he said it was much superior to the Catawba. Mr. Husmann wrote it had done well the past season. I think if I were to plant out 1000 vines, I would plant 900 Mead's Seedling, and 100 Concord. I think the Concord a week later than the Mead.

President: It is a fair table-grape, not of the highest quality, but hardy and productive, the best that has been raised in this district for table use. I received a bottle of the wine, and to my taste it is the best still wine I have drunk from any American grape. The single exception I would make would be the "Cape," the memory of which remains with me to this day. The Mead's Seedling, as I have seen it twice, is a superior table grape, better than the Concord or Catawba. As to the Delaware, I don't think the high praises that have been bestowed have been realized here; but I don't give it up; in a short time its merits will be more fully tried. There are others that have been tried here, the Norton and Herbmout, and both seeming to attain high prominence in our State.

##### HARTFORD PROLIFIC.

Mr. Elliott: I think this grape agrees with our soil and climate, and is good enough. It ripens early in the season when we want it, and will command a good price in market, as other fruits are not in such competition.

Mr. N. J. Colman: I have seen it grown by others; would plant it for an early grape; it comes a week or ten days before the Concord; healthy; it drops its fruit in this climate, but not enough to detract from it; is rather foxy.

Secretary: I have grown and fruited the Hartford; it is a strong grower, healthy, hardy, and very productive; does not drop its fruit with me nor with Mr. Husmann, nor have I heard of it doing so in our State. Eat the fruit on the 10th day of August fully ripe, and gathered the last from the vine on the 4th of November. It ripened several of its bunches upon layers in the ground, like potatoes, without rot. Some of the bunches I exhibited before the Meramec Horticultural Society, and were visited at the vine by several persons as a curiosity.

Dr. Claggett: In fruits in general, and in grapes and peaches in particular, the earliest ripening are never the richest.

Mr. N. J. Colman: The Norton and Herbmout deserve to be cultivated for wine; they are healthy, not subject to rot, blight, or mildew. The Herbmout is a superior table and wine grape; any one who has tasted the grape will say it is delicious. I have seen the Cunningham; eaten the fruit and drank the wine. It is a fine grape.

Secretary: At the Special Meeting of this Society, in Hermann, last year, Mr. Noe stated that while the Herbmout was young it was tender, but when it attained the age of 8 or 10 years it was as hardy as the Catawba. I was in Hermann last winter, and was much disappointed at seeing Mr. Noe's own old Her-



bemont (at least from 10 to 15 years old) covered with straw, showing he had no faith in his own statement; and where a grape requires winter protection, we must be careful in recommending it for general cultivation, however high its other excellencies, and I regard the Herbemont as of the highest excellence both as a table and a wine grape.

Mr. Cousins: In 1851 and 1852 there was exhibited a grape by a gentleman, who took two premiums for the best native grape. Mr. Kosser with some difficulty got a vine, and I got one from him, and upon fruiting it, it proves to be the Burgundy. Mr. Kosser bought the plant for half a dollar. Either the premium was not properly obtained, and it was awarded to a foreign grape, or Mr. Kosser was cheated.

Mr. Sanders: The Burgundy is sometimes cultivated in the open air in England, which, I think, is not done with any other varieties. It has a blue bloom.

Mr. Pettingill: Mead's Seedling ripens about the 10th or 15th of September, or before the Catawba.

#### CURRENTS.

Mr. Pettingill: I have the Red and White Dutch, Victoria, Knight's late Red, Prince Albert, Cherry and White Grape, Black Naples and Black English. I have succeeded well in fruiting the Red Dutch; I have been my main crop. White Grape is one-third larger than the Red Dutch. Victoria, which should be  $\frac{1}{2}$  larger than the White Grape, has been smaller, with the same cultivation.

Mr. Sanders: I have had the borer in the same year's growth cause the wood to die; they seemed to die without a cause. I always cut back the young growth a little, and would mulch in the fall months. I see many prune their bushes in the tree form, and after two or three years are apt to break off. I like to have at least one branch remain at the root. In pruning, I take out the old wood at about the third year's fruiting, as the fruit becomes less on the old wood. The currant bears upon the last, second, third and fourth years' growth; the Black upon last year's growth. A gentleman in Illinois made more by his Black Currants than any other small fruit; it was sent to Chicago. He had one row a quarter of a mile long, about 4 to 5 feet apart. They are much used for jelly.

Dr. Claggett: I have been making some efforts to raise the currant, but it has been a failure. I think this question as to mulching will do much in the way of success. The English varieties have failed from drouth. I think now we can raise them by mulching.

Mr. N. J. Colman: I visited Mr. Booth, in Alton, who was raising for market. He finds there are some particular varieties profitable, the Cherry, White Grape and Red Dutch. He has been trying for three years, and from this year had great hopes.

Mr. Quinette: Thinks if we try to make the currant profitable for market here we will not succeed. We are too far South. The currant makes its growth here in from 60 to 90 days. The only way to succeed is by mulching and planting on northern slopes.

Mr. Pettingill: In regard to the necessity for mulching, 20 years ago we had to go to Mr. Flagg's father for everything in this line. In the summer of 1854 his currant bushes were killed by the drouth. I wanted to get currant bushes for sale. My bushes did well; his bushes were dead. Mine were mulched; his were not. This proved to me that mulching was the remedy.

Mr. Quinette: In this branch of cultivation, you will get more by mulching than any other way. Prepare the ground well before planting; plow as little as possible, and let the roots come to the surface, and keep well mulched.

Mr. Pettingill: About three weeks ago, I examined some plants where the mulch had been down 7 years, and I found the roots all upon the surface; the mulch was about 4 inches deep.

Mr. Flagg: Has there been any attempt at the photographing of fruit?

Mr. N. J. Colman: Dr. McPherson had some very fine Lombard plums; he had a branch perfectly covered with fine fruit, and got a likeness of it taken.

Secretary: The Doctor exhibited at the Meramec Society's Exhibition a photograph of a Corinthian column, with a small wreath of some fruit on it. It looked so like the broken pillar being the picture that a note at the bottom had to tell that it was the fruit, and not the pillar, that was to command the spectator's attention.

Mr. Flagg explained that the Illinois Society was engaged in getting photographs of fine fruit, in order to set their identity at rest, so that the engraver could work from the photograph.

Mr. N. J. Colman said he knew a lady in St. Louis, who would paint from nature any piece of fruit for one dollar, and he could guarantee its correctness.

On motion, the meeting adjourned to meet the Second Tuesday in January, 1863.

WILLIAM MUIR, Sec'y.

TRICKS OF THE WINE TRADE.—The United States are represented to be the largest consumers of champagne in the world, and the consumption per annum is estimated to be one million baskets. The whole champagne district is about twenty thousand acres, and the amount of wine manufactured for exportation is ten million bottles, or about eight hundred thousand baskets. Of this, Russia consumes 160,000, Great Britain and her possessions, 165,000, France 162,000, Germany 146,000 and the United States 220,000. The custom house in Philadelphia, through which passes a large amount of the champagne imported into this country, reports only 175,028 baskets per annum. Seven hundred and eighty thousand bottles, therefore, of the wine drunk in this country for imported champagne, is counterfeit—an amount equal to the whole supply of the champagne district for the world.

GRAPE PACKING IN CLEVELAND.—The grape trade of Cleveland is growing into importance. Several firms are now engaged in packing and shipping grapes to all parts of the country. The *Cleveland Herald* says these shippers have sent off over thirty-five tons of choice Catawba to numerous points in the South, West and East, and have now about fifteen tons of the same kind on hand, put up in all styles, from large shipping cases to small boxes for family use. The grapes are carefully selected and neatly packed. Cleveland grapes have already attained a fine reputation among the purchasers in other States, and at no distant day the title of the Vineyard of Ohio will be applied to the shores of Lake Erie, instead of to the banks of the Ohio river.

In a private letter from John P. Sacksteder, Louisville, Ky., he says: "I have often seen remedies for preventing rabbits from eating the bark from fruit trees, none of which, I think, are as certain as the following—rub the bark with a piece of bacon."



[Written for the Valley Farmer.]

### NUTTING.

What memories rise,  
At mention of this word,  
Of rustling woods, and happy skies,  
And gentle airs, scarce heard,  
Wandering o'er hills and dells,  
And whispering in the nooks  
Where the sweet sunshine dwells.

Ah! 'tis a pleasant time!—  
Yet sad—when Autumn in his prime  
Comes forth, half sorrowful, half glad,  
As if in search of the late comer,  
The beautiful bright Summer,  
Whom yet he findeth not. She's down  
Where softer skies and fields are known,  
And left us with the lone October,  
Month of gay woods and golden skies,  
But very sober.

'Twas such a time, with such a sky,  
That forth we went, Katy and I.  
Her hair was dark as the dun leaf,  
Her eyes a hazel brown;  
Her form was lithe as the fair beech  
That dropped its treasure down—  
And tall, and graceful too.  
So walked she at my side,  
But half in flutter at a thought—  
She was to be a bride.

Forth o'er the field and through the dale  
We went, happy, content,  
Whiling away the time with sweet consent,  
Until, at last, in pleasant mood,  
We reached the wood.  
Hark! was't a titter that was heard?  
No; 'twas some autumn bird,  
Some lone bird left behind.  
We will be kind—  
Ah! there it is again. No bird is that—  
I see the glancing of a shawl, a hat.  
Yes, there are birds, two human birds!  
And now I hear their very words,  
Distinct and clear—  
And see them as we draw more near,  
Like two draped Hebes in the wood,  
Busy among the leaves,  
Wrapt in warm shawl and hood.

They see us not, nor hear  
Our footsteps. Nearer, and more near,  
We come. And now,  
No beech-nut from the bough,  
But a real bough, is dropped—whereat  
A head is raised as 'twere a bird's,  
Timid and shy. It meets my eye.  
What flutter, and what half-suppressed alarm!  
"Oh Mi!" (that was her sister's name.)  
"My dress! what shall I do?"  
She said, or seemed to say.

(Perhaps I was too far away  
To understand the same.)  
She knew not what a charm  
Lay in the homeliness  
Of that poor dress.

She was the youngest of the three—  
Martha, Almira, Kate—  
Kate yet, but Mrs. soon to be.  
And now what busy hands,  
As well as busy hearts!  
Eyes looked and laughed,  
As eyes will laugh, and tell—  
What secrets will the eyes not tell?  
Oft more than the sly tongue imparts.

It was a merry company; and yet,  
There was a sadness too. 'Twas not regret,  
Nor was it the sadness of the season;  
There was another reason—  
Perhaps "the dress," perhaps the coming bridal;  
But all my guesses must be idle.  
I only know it was a pastime,  
Pleasant among the leaves and trees.  
And will it be the last time?  
This will it be—a memory,—  
That will not soon forgotten be.

F. G.

[Written for the Valley Farmer.]

### HOME.

How many endearing associations are clustered around that little word home.

We know not how to appreciate its pleasures and its influences, while it is still in our possession. It is only when we experience its loss that we feel the inadequacy of all other places to supply in our affections the place of a lost home.

My early home was a cheerful and happy one. The family consisted of a careful father, who was watching with absorbing interest every indication of improvement in the youthful minds of his children; a tender mother, who devoted her energies to their instruction, and a happy group of brothers and sisters, who were unacquainted with care, sorrow or severity.

At the command of Him whose right it is to rule, death came and removed the father. The anxious, care-worn, distressed mother, was prostrated by sickness, and new homes were appointed to their children; but they were homes only in name. The charm was gone.—The father's voice—the mother's smile, the sister's prattle: all were gone. The days of my childhood and youth were passed among strangers, and often in the busy bustle of life, in the social circle, in the calm and silent retreat of solitude, have I involuntarily wept at the thronging memories of my early home, and of those multiplied joys which passed so rapidly away.

There is consolation in the hope of meeting an unbroken—rather a re-united family, in a home of unsullied bliss, far, far away in that bright world, where Jesus has gone to prepare a place for those that love Him.

ORPHA.

## Editor's Table.

# RENEW.

## THE CLOSE OF THE FOURTEENTH VOLUME.

The January Number sent only to those who Renew their Subscriptions.

This number closes the FOURTEENTH year of the VALLEY FARMER. Many of our readers' subscriptions will end with the December number.

We have labored faithfully to make this journal practically useful and interesting, not only to the Farmer, Stock Raiser and Horticulturist, but also to the Family Circle, to whom a share of its pages have been devoted; and we are satisfied from the rapid increase in our subscription list, that it is becoming more appreciated by every friend of the soil in the West. In fact, the pressure of the times has led many to embark in Agricultural pursuits as the Eureka of substantial investment for their money. Never was there a time when practical, thoughtful farmers needed an agricultural journal more; and we are sure that all on our books, whose year expires with this number, will not for a moment think of doing without it. As a gentleman remarked who subscribed the other day—"I cannot sleep without it." We shall look, then, for all our subscribers to renew, promptly. We are impelled to a course of promptness in sending only to those who renew and forward their money, from the fact that we have to be prompt in all our payments. And though the subscription price is but a trifle to each, yet, in the aggregate, it is essentially valuable to us in discharging our printing bills as we go along.

Friends, send in your subscription money, and remember that with the January number each one will receive FREE a practical treatise on Sorghum. Single names \$1 per year; in clubs of four or more, 75 cents each.

## The Essay on Sorghum.

We can promise our readers one of the BEST Essays on the Cultivation of Sorghum that has ever been issued from the press. It is thoroughly practical. Every one who reads it can understand it, and cultivate the plant, so as to make an excellent article of Syrup or Sugar. Every branch of the subject is clearly and profoundly discussed. It treats of the different Species of the Cane; its Cultivation; Time of Planting; Mode of Planting; Mode of Cultivation; Stripping; Topping; Time and Manner of Cutting; Mills; Grinding; Evaporating Apparatus required; Granulation; Process of Sugar Making; Profits of Culture and Manufacture.

The Essay is written by a thoroughly practical man—a gentleman, we believe, who has been largely en-

gaged in its culture ever since its introduction in this country. The matter is not theoretical, but is the result of experience, and can be implicitly relied upon.

We shall have this valuable Essay for sale by the hundred or thousand copies. Single copies 50 cents each. Every Subscriber who renews his subscription for 1863, and every New Subscriber, will receive this Essay as a PREMIUM.

We have expended a good deal of money as well as labor to obtain the Essay for the benefit of our readers, and trust they will reciprocate the compliment by laboring to augment our list of subscribers. There is not a neighborhood in the West where our list could not be doubled. Will each of our friends interest himself in procuring a few more names?

## New Illustrated Rural Manuals.

THE HOUSE; THE GARDEN; THE FARM; DOMESTIC ANIMALS.

Fowler & Wells, of New York, have combined their four popular above-named works in one large volume, with embellished cover, and published it in the best style of the art. We know of no work so useful to the farmer. It treats upon the very subjects upon which the farmer most needs information. We would be glad to see this excellent work largely patronized.—Price, \$1.50.

## SORGHUM SYRUP WANTED.

The Editor of this Journal wishes to purchase one or two barrels or half barrels of good Sorghum Syrup. Those having it to sell, will confer a favor by notifying us.

## Mo. State Horticultural Society.

This Society meets in St. Louis on the Second Tuesday of January. We hope there may be a very full attendance of the Fruit Growers of the West. The discussions are always interesting and profitable, and this re-union of Fruit Growers is always attended with great advantage to all.

The meeting of this Society will be held in the Court House, where we hope to see representatives of Horticulture not only from Missouri but the contiguous States.

THE ILLINOIS HORTICULTURAL SOCIETY meets at Bloomington on Tuesday, the second of December, and will remain in session four days. The programme is one of unusual interest. Every pomologist in the West should be in attendance. No State Society has more intelligent or worthy members than the Illinois Horticultural Society.

## CLUBS.

Let all our subscribers read the Premium List on the cover of this number. A few hours spent in getting up a club by each subscriber would be conferring a lasting benefit on the Agriculturist and promoting the prosperity of the West.



**AMERICAN ENCYCLOPEDIA.**—The greatest work of the age is the American Encyclopedia, now issuing from the press of Appleton and Co., of New York City. We have now received the first fourteen volumes, and they are one of the completest libraries of themselves we ever read. As a work of reference on all subjects, it is incomparable. Indeed, no man in any profession of life can afford to be without it. The best investment the young man can make is to obtain this work. He can pursue and acquire more information from it than all other nearly combined. And the knowledge it contains is reliable. It is put in the best shape, stripped of all surplusage, and contains only the naked simple truth. It is modern also. The best scholars of the age are at work upon it.

Kille & Co., No. 89 Fourth street, St. Louis, are agents. By all means call upon them or address them, and obtain the most important work of modern times.


#### CONTENTS OF NO. 12.

<i>Agricultural.</i>	
Deepening the Soil, - - -	353
How a Toad Pulls off his Pants; Planting Chesnut for Timber, - - -	354
Cultivation of Wheat; Fall Plowing, - - -	355
Apple Butter, - - -	356
Advantage of Under-Draining; Use of Coal Oil; Cure for Potato Rot, - - -	357
Thirty-six Maxims for the Farmer, - - -	358
Preserving Potatoes by Burying them; Bees—A Chapter of Well Settled Facts, - - -	359
Family Cider Mill; Dissolving Bones, - - -	360
Farmers' Libraries; Give Hens Meat; Some Facts in Agricultural Science, - - -	361
Fertilizing Properties from the Air; Variety in Creation, - - -	362
<i>Stock Department.</i>	
Veterinary Department—Enlargement of Spleen, - - -	363
The Different Types of French Cattle, - - -	364
Steaming Feed for Working Stock; When to Feed Work Animals, - - -	365
Blindness Among Horses—Its Causes, - - -	366
Care of Cattle in Switzerland; To Cure Kicking Cows; Effects of Hungarian Grass, - - -	367
Devon Cattle; Jewels in Sheep's Ears, - - -	368
<i>Horticultural.</i>	
The Catalpa Tree; The Color and Culture of Apples, - - -	369
Knox's Late Grape Exhibition, - - -	370
The Lawton Blackberry, - - -	371
Meramec Horticultural Society, - - -	372
Mo. State Horticultural Society, - - -	372
<i>Home Circle.</i>	
Nutting (Poetry); Home, - - -	376
<i>Editor's Table.</i>	
377.	

#### FOR SALE:

300,000 selected 2 year old Apple stocks, @ \$2.50 P. M.	
100,000 " 1 " " " " 1.50 "	
50,000 " Angers Quince Stocks, 10.00 "	
10,000 2d Class " " " " 5.00 "	
10,000 selected 1 year old Plum Stocks, 8.00 "	
5,000 2d Class " " " " 4.00 "	
nov17 H. A. ENSIGN, Ohio Nurseries, Toledo, O.	

#### FOR SALE!

 500,000 Apple Seedlings, 2 years old, selected.	
100,000 " 1 year " "	
200,000 Apple Trees, grafted, 2 to 8 years old.	
Also, a general assortment of Small Fruits, Osage Orange Plants, Evergreens, &c. &c.	
Root Grafts put up for \$5 per 1000.	
At the McLEAN COUNTY NURSERY, BLOOMINGTON, ILL.	
[nov31] By COLMAN & DRAKE.	

## TO SUTLERS, ARMY CONTRACTORS

AND OTHERS ENGAGED IN THE

## Care & Management Of Horses

AND

## Other Domestic Animals!

A GREAT WORK ON

## Homœopathic Veterinary Practice,

With cases containing a complete supply of Medicines, in a convenient and portable form. Recommended by Wm. E. Hamlin, Esq., and the Commander-in-Chief of the Army of the United States.

## The Homœopathic Veterinary Treatment

Has been in use in a large proportion of the Stables of New York, Philadelphia and St. Louis;

Also the large Circus Establishments which traverse the country, and among drovers, with the most satisfactory results. Of the ten batteries which Rhode Island has sent into the service of our country, (each battery numbering about 100 horses),

The Government has furnished for all Homœopathic Medicines and the Veterinary Manual.

The success of this treatment with sick horses in the Army, has excited the greatest attention.

## GEN. McCLELLAN HAS DECIDEDLY EXPRESSED HIS PREFERENCE,

and has adopted for himself and horses the Homœopathic Treatment.

## Call and Examine.

For sale at LUYTIES' HOMŒOPATHIC PHARMACY, No. 51 North Fifth Street, between Olive and Locust, St. Louis, Mo.

Also for sale, a complete

## TREATISE ON DIPHTHERIA,

by Wm. Tod Helmuth, M. D.,

Price \$1.25; with case containing the necessary Medicines, \$3.00.

As this disease is prevailing to a fearful extent in our State, everybody ought to have the proper remedies at home. Address,

H. C. G. LUYTIES,  
51 North Fifth St., bet. Olive & Locust.

# WESTERN AGRICULTURAL DEPOT, AND SEED STORE.

**BLUNDEN, KOENIG & CO.,**  
56 NORTH SECOND ST., above Pine, ST. LOUIS, MO.

Constantly on hand,

**GARDEN,  
GRASS,**



AND OTHER

**SEEDS.**

We are the **SOLE AGENTS** IN ST. LOUIS FOR THE ABOVE CELEBRATED SEEDS, and buyers can rely upon getting from us an article **PURE AND TRUE TO NAME**. Also, Wholesale and Retail Dealers in all descriptions of

## Agricultural Implements and Machines,

Comprising in part **READING'S PATENT POWER CORN SHELLER**, warranted to shell and clean 1000 bushels per day. **EXCELSIOR HAND AND POWER CORN SHELLERS**, will shell from 200 to 400 bushels per day. **THRESHERS, FANNING MILLS, FARMERS' BOILERS, TELEGRAPH** and other **CUTTING BOXES. MOLINE AND PEORIA PLOWS, CULTIVATORS, HARROWS, &c.**

Send for Catalogues and Almanacs—**GRATIS.**

**BLUNDEN, KOENIG & CO.**

### A GOOD INVESTMENT: ONE THAT PAYS.

#### THE "PRAIRIE FARMER,"

Has now been published in Chicago, Ill., for twenty-two years, without intermission. It is devoted to the **PRODUCER'S** interests, treating of

**GENERAL AGRICULTURE,  
STOCK RAISING,  
HORTICULTURE and POMOLOGY,  
And DOMESTIC ECONOMY** generally.

The publisher's aim will be to give such information and assistance as will enable the farmer to grow the **LARGEST CROPS** with the **LEAST EXPENSE**, and what is equally important to assist him in securing the

#### LARGEST PRICES

the market affords, by giving such reliable information as is obtainable concerning the markets at home and abroad—the cost of forwarding produce to market, and other attendant expenses—thus enabling the producer to take advantage of the conditions of the market in disposing of his produce.

#### FORM OF PAPER.

The paper consists of 16 pages large quarto, making a convenient size for binding and reference. A full index is given at the end of each six months.

#### CONTENTS.

About five pages are devoted to **GENERAL AGRICULTURE**. One to two pages to **HORTICULTURE**. One page to **GENERAL LITERATURE**. Two or more pages to **GENERAL WARE MISCELLANY and NEWS**. Two pages to **MARKETS and RECORD of SEASON**, and asking and answering questions, and general editorial items.

A portion will also be devoted to **ADVERTISEMENTS** of such character as is appropriate to an agricultural paper.

### A NEW VOLUME

Commences January 1, 1863, and the present time affords the best time to form Clubs for the year.

One copy one year,	-	-	\$2.00
Two copies one year,	-	-	3.00

Larger Clubs furnished at liberal rates, or premiums given where Clubs of 6 or more are sent at \$1.50 each.

Specimen copies and show bills sent to any one who desires them for examination or the purpose of raising a Club.

To those who desire to gain reliable information of Western Agricultural matters, **THE PRAIRIE FARMER** will give them more reliable intelligence than can be gained from any other source and will well repay the investment.

For sale by News Dealers generally.

For samples or other information concerning the paper, address

it] **EMERY & CO., Chicago, Ill.**

### DEVON STOCK.

Stock raisers and others, in want of Devon Stock can be supplied with a limited number at moderate prices, by calling on the undersigned, 12 miles from St. Louis, on the St. Charles Plank Road.

**WM. W. HENDERSON,**  
Or address the Subscriber at Bridgeton, Mo. [if

### HENRY STEES,

Agent and Dealer in

### AGRICULTURAL IMPLEMENTS,

**MOUNT CARMEL, ILLINOIS.**

Articles of Merit of Every Description Received and Sold on Commission.

Singer & Co.'s "LETTER A" FAMILY SEWING MACHINE, with all the new improvements, is the BEST AND CHEAPEST, and MOST BEAUTIFUL of all Sewing Machines. This Machine will sew anything—from the running of a tuck in Tartertan, to the making of an Overcoat. It can FELL, HEM, BIND, BRAID, GATHER, TUCK, QUILT, and has capacity for a great variety of ornamental work. This is not the only machine that can fell, hem, bind, braid, and so forth, BUT IT WILL DO SO BETTER THAN ANY OTHER. The new and improved Hemmer is added without extra charge. The Braider is one of the most valuable of the recent improvements.

The "LETTER A" FAMILY SEWING MACHINE may be adjusted for sewing heavy or light textures, anything from pilot or beaver cloth, down to the softest gauze or gossamer tissue, with ease and rapidity.

The "Letter A" Family Sewing Machine is so simple in structure, that a child can learn to use it, and having no liability to get out of order, it is EVER READY TO DO ITS WORK.

Like our well known MANUFACTURING MACHINES, (the prices of which we have greatly reduced, so as to keep spurious imitations out of the market,) the "Letter A" or Family Machine makes the INTERLOCKED stitch. Indeed, it embodies some of the most essential elements of the Manufacturing Machines, combining all the elegance of outline and finish of any Machine which has yet been presented to the public. The Family Sewing Machine constitutes the greatest success in Sewing Machine inventions and enterprises. This "Letter A" Family Sewing Machine is destined to find its way into every household, to the exclusion of the numerous toys and nuisances in the shape of worthless Sewing Machines, which have been palmed off on the public.

A bad Sewing Machine, as the purchaser will very soon discover, is worse than useless—it's in the way.

Every one who has Sewing Machines to sell, claims that his is the best. It is the business of the buyer to find out the best, and not to purchase on mere hearsay or laudation. It is the business of the buyer to see that the Machine about to be purchased will do all that is claimed for it—to see that it is easy to learn to use it—that it can be easily adjusted for all kinds of work—that it has durability, and that it can be used without liability to get out of order.

Singer & Co.'s "Letter A" Family Machine is ready for each and all of these tests.

On examining the merits of different kinds of Machines, the first and most important thing is to weigh and consider the CAPACITIES of each.

There is no Machine in the market which can do so many kinds of work as the "Letter A" Machine. Let it be tested with the finest thread, (say No. 200 spool cotton,) and let it be tested with the coarsest thread, (say No. 30,) and let it be tested with all intermediate kinds of cotton thread, and also with both fine and coarse flax thread, upon light, medium and heavy fabrics, and then apply the same tests to other Ma-

chines, and the respective capacities of each for a GREAT RANGE of work, will soon be discovered.

A Family Sewing Machine cannot be justly called such unless it will do ALL KINDS of family sewing. It ought to be able to sew neatly and well all kinds of clothes for boys and girls and grown persons. If the saving of labor be of any value, or that it is desirable to prevent the fairer portion of our race from wearing out the thread of life in weary hand-sewing, no family can afford to be without a good Sewing Machine. The lady who lives amid the costly luxuries of city life, would do well to purchase a good machine for her seamstress. Indeed, the Family Sewing Machine itself is "a seamstress"—one which can be closeted in a cabinet case at pleasure—one which is never in the way, and never out of it.

To the poor work-woman who has to sew for her daily bread, the Family Sewing Machine will prove a treasure. No Vestmaker or Dressmaker can do without it.

To the Farmer who wants to clothe his sons and daughters, and "men-servants and maid-servants," economically, the Family Sewing Machine will prove indispensable. There are no persons more in want of Family Sewing Machines than the Farmers of America. Next in importance to feeding a family, comes the clothing of a family. This is true of a whole nation as well as of a single family. A nation is a big family. The Farmer uses labor-saving machines to cultivate and harvest his crops. If he does this to get bread, why not use the best labor-saving Sewing Machine to clothe his family? There is as much economy in one case as the other, and if the farmer has a big family, more too.

Some of the Sewing Machine Companies seem to be particularly active in trying to get the public to believe that they are the most successful in obtaining premiums at the different State and County Fairs in the United States, and also at the Agricultural Exhibitions in the British Provinces. In the beginning of their career, Singer & Co. also were careful to exhibit their Machines as the principal Fairs, but after having received the Gold Medal of the American Institute, for two successive years, and many other valuable prizes at most of the important exhibitions in this country, as well as the Gold Medal of the "Universelle Exposition," at Paris, in 1855, and so forth—but more than all, when the public at large admitted that their Manufacturing Machines were the very best, and when governments felt the necessity of buying them to make clothing for their soldiery, they began to feel there was no great advantage to be gained by continuing to exhibit Machines, the good qualities of which no one disputed. The French Government use Singer & Co.'s Machines extensively in the manufacture of clothing for their army, and recently the British Government purchased Machines largely for a similar purpose. The extent to which they are used in the making of clothes for the United States forces, is too well known to need comment.

## EDWIN DEAN, AGENT, FOR SINGER'S SEWING MACHINES,

Continues, at his old Stand, No. 85 FOURTH ST. ST. LOUIS, MO.,

To sell at New York prices (transportation added); where, during seven years, he has received the most gratifying testimonials of satisfaction from thousands that have been made happy by the purchase of Machines.

Orders received by mail, and Machines sent at Agent's risk, by Express, C. O. D., any distance.

Every Machine guaranteed three years.

Old Machines repaired and made as good as new.

Machines are sometimes rendered useless for the time by bad oil. A bottle of our lubricating oil at 25 cents per bottle or \$2.00 a dozen, will rectify the difficulty.

Those who purchased Machines a few years ago, would not recognize them as now manufactured. Needles are also much improved and reduced in price—75 cents the dozen, or 16 for \$1.00, inclosed by mail. The best of silk, linen and cotton thread at the lowest rates.

N. B. As all cheap Machines make the Double-lock Stitch, which requires nearly 200 per cent. more than the Singer, or Shuttle-Stitch, it is computed that, at the present high prices, the saving in thread alone during a year, will amount to a sum equal to the difference in the price between the two Machines.



